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ABSTRACT

A description is provided of the work accomplished in the course of a Title III funded project at the Pueblo Elementary School in Scottsdale, Arizona. Part I of the report describes the function of the instructional materials center in a school with an open-class learning center design. Part II deals with the coding system created to retrieve instructional materials to match student needs, showing how materials are classified by subject matter area, grade level, and specific concepts and skills. The third part of the document addresses the topic of coding audiovisual materials, presenting details about a computerized cataloging and retrieval system which provides centralized acquisition and cagaloging services for non-print materials to the schools in the district. The concluding section offers a catalog of microfiche on 13 different subjects. (PB)

ED 088426

KEEPING ORDER...

CODING-MATERIALS, AUDIO VISUAL AIDS, AND MICROFICHE

E.S.E.A. TITLE III

STAFF UTILIZATION FOR

CONTINUOUS PROGRESS EDUCATION

SCOTTSDALE PUBLIC SCHOOLS

SCOTTSDALE, ARIZONA

IR000 237

ED 088426

STAFF UTILIZATION FOR CONTINUOUS PROGRESS EDUCATION PROJECT E.S.E.A. TITLE III

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TITLES AVAILABLE ON MICROFICHE*

CURR 000 001	Language Arts Scope and Sequence (K-8)
CURR 000 002	Language Arts Instructional Materials (1-2)
CURR 000 003	Language Arts Instructional Materials (1-2)
CURR 000 004	Mathematics Scope and Sequence (K-8)
CURR 000 005	Mathematics Pre-Post Tests (3-4)
CURR 000 006	Social Studies Scope and Sequence (K-8)
CURR 000 007	Social Studies Instructional Units (K-8)
CURR 000 008	Science Scope and Sequence (K-8)
CURR 000 009	Science Course of Study (7)
CURR 000 010	Science: 14 Self-Pacing Units (8)
CURR 000 011	Art, Music, and Physical Education Scope and Sequence (K-8)
CURR 000 012	Keeping Order (Coding): Instructional Materials, Audio-Visual Aides, Microfiche (K-8)
CURR 000 013	Diagnosis: Academic Level & Performance Capabilities (K-8)

*PLEASE ORDER BY CODE NUMBER

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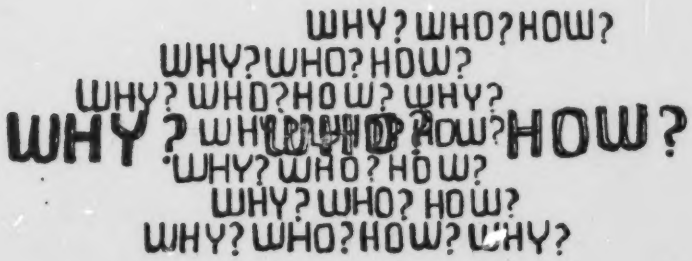
"KEEPING ORDER"

PART I

THE INSTRUCTIONAL MATERIALS CENTER



THE PUEBLO INSTRUCTIONAL MATERIALS CENTER

Pueblo Elementary School

STAFF UTILIZATION FOR CONTINUOUS PROGRESS EDUCATION PROJECT

E.S.E.A. TITLE III

MARCH 1973

Developed by:

Christa Metzger

WHY? WHO? HOW?

The Pueblo Instructional Materials Center

INTRODUCTION

The Pueblo Instructional Materials Center (IMC) is part of the Pueblo Elementary School in Scottsdale, Arizona. Pueblo School was opened in the fall of 1970. The physical plan is based on an open-class learning center design. Concepts of differentiated staffing and individualized instruction are utilized. The IMC, where all types of learning resources are provided, is an integral and important part of the school.

The overall design of the IMC provides for

A unified media center with access to a full range of resources of all types by students and teachers.

Media which not only supplements instructional programs but is an integral part of the curriculum.

Cooperative effort of teachers, administrator and media specialist in selecting and evaluating resources and planning for their most effective use in the curriculum.

An "open" facility and a flexible schedule where individual students are free to come in for purposeful activities individually or in groups.

An auxiliary "resources center" in each of Pueblo's open-space learning centers where materials and equipment are readily available to students.

Extensive and effective use of parent and student volunteers.

WHY? WHY? WHY?

Underlying the goals and philosophy of the media program at Pueblo are these values:

INVOLVEMENT - we believe that students are more important than materials. Students use the materials and have free access to them. An underlying framework of controls is set up which protects materials and equipment from misuse or loss.

RESPONSIBILITY -we believe in developing independent responsibility in each student for his own behavior and learning. Responsible use of media and equipment is the result of this belief.

SENSITIVITY - we believe that each student who comes to the IMC is unique in terms of his own needs and feelings. Awareness of these differences is the basis to our providing for varied purposes in use of media and learning spaces for students.

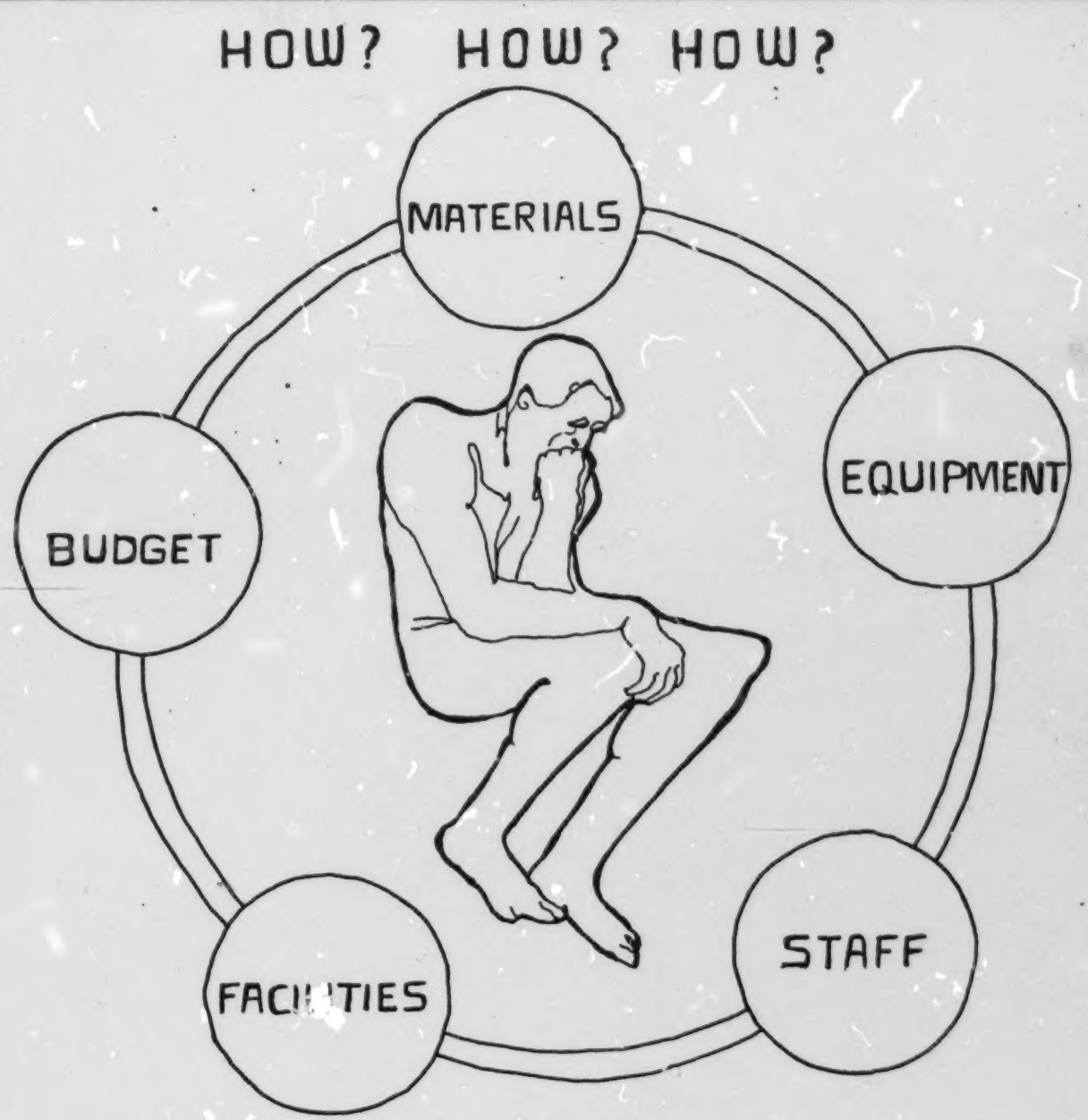
SCHOLARSHIP - we believe in encouraging pursuit of knowledge and learning. Freedom to examine and explore media provides stimulation to each student in his search for meaningful information.

AUTHENTICITY - we believe in open, honest communication with students as well as faculty and staff. Cooperative effort is essential in providing a meaningful resources program.

DEMOCRACY - we believe in providing an atmosphere of warmth and participation with absence of authoritarian rigidity, where purposeful learning is evident.

Our Basic PHILOSOPHY

It is the task of education to prepare individuals who are capable of meeting the challenges of a rapidly changing and complex society. Education is a process. The focus is on helping each learner become responsible for his own education. Skills of inquiry are developed in the search for basic concepts on a continuous progress basis--where each student may progress at his own rate. This type of individualized learning is a basic philosophy of Pueblo School. The existence of an effective media program is essential in working toward desired educational goals of all persons within the school. Learning resources are an integral part of the school's curriculum. The role of the media center director is one of guiding and enriching learning experiences for students, not merely supplementing the curriculum. The total school staff affects and is effected by the media program. Emphasis is placed on the cooperation and coordination of all persons, including school district personnel, who are involved in instructional processes.



IMPLEMENTATION: PROGRAM AND SERVICES

Facilities

The spaces provided for various types of activities express our philosophy. Flexible use of space is basic. Areas include the following:

1. Large group reading and study area.

2. Display areas, such as display case, shelf space and bulletin boards to which students from all over the school contribute. These areas are a true expression of the many and varied activities which Pueblo students are involved in . . . from individual student's model car collections in the display case to an array of self-made rockets from a 6th grade science class to artistic creations hanging from the ceiling.

3. A listening-viewing area equipped with wet carrels and electric strip tables for use of audio-visual materials; carrels are also used for individual study.

4. Two small seminar rooms for small group study or listening and viewing purposes--with a movable partition.

5. A "silent reading room"--strictly for silent reading enjoyment--furnished with floor lamps, bean bag chairs and large pillows.

6. A typing and activity area for students engaged in projects.

7. Office area for IMC staff.

8. A work room for processing new materials, production of media, use of copying machines and maintenance of A-V equipment purposes (this includes a photographic dark room).

9. A communication center for audio transmission to each of the learning centers. The rationale for placing the sound system (including intercom) in the IMC was to assure its primary use for instructional purposes.

10. A multi-purpose "preview and conference" room which is presently utilized as a career education center.

11. Professional-curriculum office area where the school's professional library is housed.

12. Storage area for A-V materials. This is located near the circulation desk and thus provides for supervised access to media by students.

Student Use of the IMC

The concept of an "open" facility demands great flexibility on the part of everyone concerned. At times there may be only a few students in the center; at other times it may be crowded to capacity. The basic premise on which all use of the IMC is based is purposeful activity. This may involve individual students or small groups who, for purposes of accountability, must have some type of pass from their teacher during school hours (first and second graders, for example, have a clothespin attached to their clothing which is marked: "IMC PASS"). Before and after school the IMC is open to anyone--with no "passes" required. If student groups of more than five or so wish to use the IMC, the teacher arranges for a scheduled time and plans the activity with the

IMC Director. Activities for larger groups may include the following: checking out and reading books, using A-V materials, learning study and reference skills, (research skills are best learned when there is a need for the student to use them as part of some project--rather than teaching these in isolation), general orientation sessions and special research groups. Because of this type of set-up, individualized help is the primary "teaching" activity which goes on in the IMC. As regular weekly "library" periods are not usually scheduled, careful planning by teachers is essential to make certain that every child does have time and opportunity to take advantage of the IMC resources and facility.

Auxiliary Resources Centers

These are generally located in the central area in each open-space learning center (a learning center is the "open classroom" building where students and teachers work together). Although all audio-visual equipment and materials are centrally accounted for through the IMC, most of the equipment is actually distributed or checked out to the learning centers for easy access by students and teachers. Materials and books may be checked out on a long or short term basis by teachers and housed in their "resources center" (R.C.). One person in each learning center, either a teacher or a paraprofessional, is designated as "resources coordinator" (R.C. Coordinator). This person works closely with the IMC Director in communication and implementation of the resources program, including responsibility for some of the technical aspects involved in operation of audio-visual equipment and machines.

Materials

The IMC provides a central access point for information regarding all types of learning resources. These include library books, audio-visual materials such as filmstrips, film loops, cassette tapes, sound-filmstrips, records, transparencies, slides, kits, pamphlets, pictures, periodicals and files of community and staff resources. Materials are continually evaluated as to effectiveness to assure quality in terms of purposes.

1. Selection of Materials

A variety of selection aids are used and input is obtained from students and teachers. Teacher curriculum teams, in particular, are involved in recommending appropriate and needed materials to meet needs for a variety of maturity and ability levels, interests and subject areas. All materials are classified, as are books, by the Dewey Decimal Classification System. A computerized cataloging system for audio-visual materials is in use which provides the IMC with book print-outs of all materials by title of items, by subject classification, subject heading and type of media. In addition, computer-printed 3 x 5 catalog cards are obtained for these materials which are interfiled in the central card catalog so that book and non-book resources may be easily identified from one source. Students have free access to the media storage cabinets (as they do to book shelves) and are free to use any of these materials in the IMC (equipment is set up in the listening area for viewing these materials). A student may check out one item or set (such as a filmstrip or record) and keep it out overnight. All such materials must be returned to the IMC by the beginning of the next school day. Books are checked out on a two week basis. No fines are assessed for overdue books. Responsibility is stressed and developed.

2. Other Materials Services Include:

2.1 A pamphlet and picture file of free and inexpensive materials
2.2 Old magazines for students to cut up for reports or pictures
2.3 Subscription to daily newspapers
2.4 "Birthday Books"--instead of bringing a treat for his class any student may purchase a book for the IMC
2.5 A file of catalogs of educational materials for teacher use
2.6 16mm films are ordered from the district film center (IRC) through the IMC
2.7 Periodicals subscriptions

A-V Equipment

A computerized system for inventory and accountability purposes makes keeping track of equipment a comparatively simple matter. A computerized print-out is available indicating the type of equipment, identifying numbers and assigned location (IMC or which learning center). A 3 x 5 computer-printed card giving this same information is attached to each machine for identification purposes. As previously indicated, most of these machines

are housed in the various learning centers for easy access and use. Students may, if they need to, check out filmstrip viewers and cassette tape recorders to take home overnight. The R.C. coordinator in each of the learning centers or the student's teacher takes responsibility for return of these items by the next morning. Students and teachers are trained, through R.C. coordinators or in the IMC, in the use of A-V equipment. Simple maintenance of A-V equipment is done here, but equipment is sent to the district repair shop for major problems. Because of the school's philosophy which stresses individualized learning, a greater quantity of items such as filmstrip viewers and cassette players has been purchased. Other types of equipment includes: two television receivers (with video tape hook-up capability), several programmed learning machines, tape recorders, record players, filmstrip-slide projectors and viewers, sound filmstrip projectors and viewers, overhead projectors, listening stations, a 35mm camera and a variety of production equipment (dry mount press, copying machines, etc.).

Budget

Budgetary allocations are determined by the school district. The IMC Director, under the direction of the school principal, plans expenditures for equipment, books, audio-visual materials and supplies in accordance with perceived needs of the school.

WHO? WHO? WHO?

The materials center staff, including professional and non-certified persons, has ultimate responsibility for the success of the media program. The staff includes:

1. The Director of the Instructional Materials Center who has the total, over-all responsibility for materials center functions and services. He should have broad professional preparation in educational media, as well as a teaching and librarian's certificate.

   Specific duties include:

   1.1 Supervise activities of other media personnel
   1.2 Plan for systematic communication with staff and school community regarding areas of mutual concern: attend teacher planning meetings, curriculum team meetings, publish a weekly or bi-weekly "IMC Newsletter" for the staff. This newsletter becomes the primary channel of intra-staff

communications. Opportunity should be provided for feedback and suggestions from the staff as to the media program. Open communication with staff and administration on an informal basis is essential to an effective working relationship. Communication with parents includes contributing items to the Pueblo Parent Council Newsletter.

1.3 Plan for selection and evaluation of materials
1.4 Report to and plan with the school principal
1.5 Serve as instructional resources consultant and materials specialist
1.6 Assist students in their use of the IMC
1.7 Work with teachers in curriculum planning
1.8 Coordinate, catalog and schedule instructional materials and equipment for most effective use
1.9 Advise the faculty on new materials and equipment available
1.10 Act as resource person in the learning centers if practical considerations allow this
1.11 Conduct in-service training in use of media as needed
1.12 Supervise student assistants
1.13 Communicate with district personnel

2. Clerical/Technical Assistant (Library Aide) -- who has responsibility for the supportive clerical and technical functions essential to the operation of the center: typing of newsletters, correspondence, book orders, requisitions, catalog cards, notices, lists and other records, handling mail and office routines, recording and filing catalogs, inspecting and filing materials and cards, reading shelves, supervising work room activities in materials production and copy services, district film requisitions and distributions, assisting in supervision of student assistants and students in the materials center, technical aspects of equipment operation and maintenance, and some housekeeping details.

3. Parent volunteers -- who, according to ability and training assist in the types of duties outlined for the IMC Aide. These volunteers are invaluable to the operation of the IMC. Each has some special talent or interest with which he contributes in a very unique way to the program. The excellent para-professional support frees the IMC Director for performance of professional duties and responsibilities.

4. Student assistants -- who are selected from grades 5-8 (through cooperative planning between the IMC Director and the teachers) to work 1-2 hours a week in the IMC. The bases for selection vary: special needs for active purposeful involvement by some students who otherwise have little academic success, special talents or interests as in working with A-V equipment, interest in working as an IMC assistant. Students volunteer for this responsibility and must obligate themselves to work at least one semester. They may work out of a study hall, an independent study period or out of some subject area, such as language arts where the activities they perform in the IMC support and enrich their skills in the subject area. Student assistants are scheduled to work at regular times each week so that two or three students are always available. They are trained to perform functions such as the following: checking books and materials in and out, finding book cards for returned books, shelving, helping children locate books and materials, helping students operate the machines in the "listening area", filing magazines, and aiding in production activities. Each student assistant must complete a "self-evaluation" sheet each time he works. This sheet becomes the student's record of activities and, with a written comment added by the IMC Director, this sheet is given to the child's teacher for use in his evaluation of the student's performance.

WHY? WHO? HOW?

. . . because we believe in creating a love for learning

. . . "we", the Pueblo IMC Staff, work together to

. . . involve each student in meaningful learning experiences.

"KEEPING ORDER"

PART II

CODING INSTRUCTIONAL MATERIALS

CODING SYSTEM

FOR INSTRUCTIONAL MATERIALS

STAFF UTILIZATION FOR CONTINUOUS

PROGRESS EDUCATION PROJECT

E.S.E.A. TITLE III

Developed by:

Dr. Richard Fawley
Reed Done
Rita Freeman
Gerry Nagle
Merilee Wilson

CODING SYSTEM

In recent years an increasingly large number of instructional units have been developed which focus on concepts and performance objectives. Some kind of cataloging or coding system is necessary if the retrieval of the available units is to match the needs of the students. Such a system is also valuable for organizing future materials developed locally or materials prepared by projects throughout the nation.

The following coding scheme is based primarily on skills and concepts listed in each separate subject area. The meaning of the different letters and symbols is described below.*

Column 1	Subject area identification
LA	Language Arts
MA	Mathematics
SC	Science
SS	Social Studies
AR	Art
VM	Vocal Music
IM	Instrumental Music
PE	Physical Education
Column 2	Grade level designation
0	Kindergarten
1	First Grade
2	Second Grade
3	Third Grade
4	Fourth Grade
5	Fifth Grade
6	Sixth Grade
7	Seventh Grade
8	Eighth Grade
Column 3	Major division or concept of the subject area shown by capital letter according to code on following sheet for each subject.

*When something to be coded is applicable to all the areas within the category, an X should be used.

Column 4 — Minor division or concept of the subject shown by Arabic number according to code on the following sheet for each subject.

Column 5 — Subdivision or skill shown by a lower case letter according to code on the following sheet for each subject.

Column 6 — This column can be used for more specific breakdown of the unit if needed e.g. P might indicate an individual learning packet.

—Note: An asterisk following any symbol indicates that the topic or skill shown is the main topic or skill but that the unit covers more as well.

Sample Coding:

SC 3 - P 7 *a*

This refers to a science unit for third grade in the area of physical science. The unit emphasizes the concept of "space" and the skill of "observing", but includes other concepts and skills as well.

SCIENCE CODING SCHEME

Column 3

B	Biological Science
P	Physical Science
E	Earth Science
H	Health
S	Science Skill

Column 4

1	Environments
2	Growth/Development
3	Diversity of Life
4	Behavior of Organisms
5	Time
6	Motion
7	Space
8	Energy
9	Matter
10	Astronomy
11	Fluids
12	Elements
13	Changes

Column 5

a	Observing
b	Measuring
c	Processing Data
d	Interpreting Data
e	Inferring
f	Manipulating Equipment
g	Predicting
h	Classifying

SOCIAL STUDIES CODING SCHEME

Column 3

H	History
G	Geography
E	Economics
A	Anthropology
PS	Political Science
S	Sociology
PH	Philosophy
PY	Psychology
I	Social Studies Inquiry Skills

Column4

1	Conflict	15	Dignity of Man
2	Compromise and Adjustment	16	Empathy
3	Government	17	Loyalty
4	Culture	18	Social Change
5	Climate	19	Social Control
6	Causation	20	Secularization
7	Power	21	Comparative Advantage
8	Interaction	22	Habitat and Its Significance
9	Institution	23	Modified Market Economy
10	Savings	24	Input and Output
11	Scarcity	25	Nationalism
12	Value	26	Industrialization
13	Morality and Choice	27	Urbanization
14	Freedom and Equality	28	Map and Globe Skills
		29	Historical Method and Point of View

Column 5

a	Observation, Classification, and Measurement
b	Analysis and Synthesis
c	Questions and Answers
d	Objectivity
e	Skepticism
f	Interpretation
g	Evaluation
h	Evidence

LANGUAGE ARTS CODING SCHEME

COLUMN 1
(Subject Area Identification)

LA	Language Arts	AR	Art
MA	Mathematics	VM	Vocal Music
SC	Science	IM	Instrumental Music
SS	Social Studies	PE	Physical Education
		LD	Learning Disabilities

COLUMN 2
(Grade Level Designation)

0	Kindergarten	5	Fifth Grade
1	First Grade	6	Sixth Grade
2	Second Grade	7	Seventh Grade
3	Third Grade	8	Eighth Grade
4	Fourth Grade		

COLUMN 3

L	Listening
O	Oral Expression
W	Written Expression
S	Spelling
R	Reading

COLUMN 4

1.	Correct Usage	7.	Comprehension
2.	Forms	8.	Recall
3.	Vocabulary	9.	Inflection
4.	Perceptual	10.	Sentence & Paragraph Construction
5.	Concentration	11.	Punctuation
6.	Interpretation		

COLUMN 5

a.	Accuracy	m.	Organizing
b.	Appreciating	n.	Orginality
c.	Attending	o.	Participating
d.	Choice	p.	Questioning
f.	Confidence	q.	Recognizing
g.	Creativity	r.	Reporting
h.	Evaluating	s.	Responding
i.	Following Directions	t.	Selectivity
j.	Generalizing	u.	Sharing
k.	Independence	v.	Summarizing
l.	Objectivity		

COLUMN 6

This column can be used for more specific breakdown of the unit when needed.

MATHEMATICS CODING SCHEME

Column 1 Subject area identification

LA	Language Arts
MA	Mathematics
SC	Science
SS	Social Studies
AR	Art
VM	Vocal Music
IM	Instrumental Music
PE	Physical Education

Column 2 Grade level designation

0	Kindergarten
1	First grade
2	Second grade
3	Third grade
4	Fourth grade
5	Fifth grade
6	Sixth grade
7	Seventh grade
8	Eighth grade

Column 3 Major Concepts*

S	Sets
O	Operations
NT	Number Theory
M	Measurement
G	Geometry
NS	Number Sentences

*Please note that in the math coding scheme each item of Column 3 has a separate coding for Columns 4 and 5. These are listed on the following pages.

SETS*

COLUMN 4

1. Set recognition
2. Set membership
3. Set comparison
4. Set identification
5. Cardinal numbers
6. Inequalities
7. Union, intersection
8. Set description
9. Set builder notation
10. Venn diagrams

COLUMN 4	COLUMN 5
1.	----
2.	----
3.	----
4.	a. equivalent, non-equivalent
4.	b. subset
4.	c. empty
4.	d. universal
4.	e. superset
4.	f. symbols
4.	g. disjoint
4.	h. finite, infinite
4.	i. solution
5.	a. through 6
5.	b. through 10
5.	c. cross product
6.	
7.	
8.	a. symbols $\in, \notin, \subset, \not\subset, \emptyset$
8.	b. proper, improper
8.	c. one-to-one correspondence
8.	d. replacement
9.	
10.	

*In the math coding scheme each section of Column 3 has a separate coding for Column 4 and 5.

OPERATIONS

COLUMN 4

1. Addition
2. Subtraction
3. Addition and Subtraction
4. Multiplication
5. Division
6. Fractions
7. Decimals
8. Story problems
9. Rational numbers
10. Integers
11. Percentage
12. Real numbers

COLUMN 5

1. a. properties
   b. joining sets
   c. combinations for 2 through 5
   d. terminology/symbols
   e. 0 to 5
   f. 0 to 10
   g. missing addend 0 to 5
   h. missing addend 0 to 10
   i. 10 to 18
   j. equations - families of facts to 18
   k. 2 digit without regrouping
   l. 2 digit with regrouping
   m. 3 addends
   n. story problems
   o. 3 digit w/o and with regrouping
   p. with 3 or more addends
   q. zero as a factor
   r. number sentences - open and closed

2. a. separating sets
   b. combination for 2 through 5
   c. symbolism/terminology
   d. 0 to 5
   e. 0 to 10
   f. missing numeral 0 to 5
   g. missing numeral 0 to 10
   h. story problems
   i. properties
   j. 10 to 18
   k. equations families of facts to 18
   l. two digit without regrouping
   m. two digit with regrouping
   n. 3 digit without and with regrouping
   o. with 3 or more numerals
   p. zero as a factor
   q. number sentences - open and closed
   r. place value in subtraction
   s. whole numbers greater than 1000

OPERATIONS (continued)

COLUMN 5

3. a. 0 to 10
   b. missing addend 0 to 10
   c. story problems
   d. 10 to 18
   e. 2 digit without regrouping
   f. 2 digit with regrouping
   g. three addends
   h. story problems
   i. inverse operations
   j. families of facts to 10
   k. addition and subtraction of whole numbers to 3 or 4 places
   l. column addition to 3 or 4 place
   m. missing addend to 20
   n. missing subtrehend to 20

4. a. properties
   b. symbols/terminology
   c. facts to 9 x 9
   d. multiplication by 1 digit to 3 places
   e. multiplication by 10, 100 and 1000
   f. families of facts
   g. 0 in multiplication
   h. multiplicative identity of one
   i. story problems
   j. one factor, 2 digits
   k. one factor, 3 or more digits
   l. 2, 2digit factors
   m. one factor greater than 1000
   n. place value in multiplication
   o. factors greater than 10 with multiples of 100
   p. multiplication with factors of 2 and 3 digits
   q. factors with 3 digits or more
   r. product estimation

5. a. properties
   b. symbols/terminology
   c. one digit division with no remainder
   d. one digit division with a remainder
   e. one digit division with 2 digit quotient
   f. family of facts (division reverse of multiplication)
   g. story problems
   h. 2 digit divisor without remainder
   i. 2 digit divisor with a remainder
   j. estimation
   k. 2 digit divisor with dividend of more than 3 digits
   l. 3 or more digit divisor without and with a remainder

OPERATIONS (continued)

COLUMN 5

6. a. recognition of fractional regions through 10 parts
   b. addition with like denominators
   c. recognizing equivalents
   d. story problems
   e. properties
   f. equivalent fractions and regions
   g. subtraction - like denominators
   h. addition with unlike denominators
   i. subtraction with unlike denominators
   j. equivalent - renaming
   k. multiplication
   l. improper fractions
   m. addition, subtraction - whole numbers and mixed fractions
   n. addition, subtraction both addends greater than 1
   o. division

7. a. addition through 100's
   b. subtraction through 100's
   c. multiplication through 100's
   d. division through 100's
   e. place value
   f. addition, subtraction, multiplication, division algorithms
   g. renaming decimals and fractions
   h. renaming decimals for rational numbers
   i. repeating decimals

8. a. addition whole numbers, fractions, decimals
   b. subtraction whole numbers, fractions, decimals
   c. multiplication, whole numbers, fractions, decimals
   d. division whole numbers, fractions, decimals
   e. 2 or more operations

9. a. laws
   b. addition
   c. subtraction
   d. multiplication
   e. division
   f. comparison

10. a. negative numbers
    b. positive numbers
    c. addition
    d. subtraction
    e. multiplication
    f. division

11. a. ration and proportion
    b. ratio and percent
    c. applications
    d. percents and graphs

12. a. irrational, rational

OPERATIONS

COLUMN 6

9. b. 1. properties
2. algorithms
c. 1. properties
2. algorithms
d. 1. properties
2. simplifying
3. properties of zero
44. properties of one
5. algorithm
e. 1. algorithm
10____

11. d. 1. statistics
12._____

COLUMN 7

1._____
2._____
3._____
4._____
5._____
6._____
7._____
8._____
9. b. 1. a. associative
b. commutative
d. 1. a. associative
b. commutative
c. distributive

NUMBER THEORY

COLUMN 4

1. Cardinal numbers
2. Rote counting 0 to 10
3. Order
4. Writing numerals
5. Odd and even numbers
6. Notation
7. Place Value
8. Prime numbers
9. Identity element of zero, one
10. Factors
11. Symbols
12. Multiples
13. Estimation of whole numbers
14. Ratio and proportion
15. Integers
16. Rational numbers
17. Percents
18. Probability
19. Statistics
20. Real numbers

COLUMN 5

1._____
2._____
3. a. inequalities, equalities
   b. before, after, between
   c. many names - same number
   d. ordinal numbers
   e. counting, sequencing
4._____
5._____
6. a. writing numerals o0 to 10
   b. writing numerals 0 to 100
   c. sequencing
   d. skip counting through 2's, 5's
   e. zero
   f. writing 100 to 1000
   g. skip counting 10's to 100
   h. one
   i. recognize and write 10 through 99
   j. recognize and write numbers less than 1000
   k. odd and even
   l. multiples of 100
   m. before, after, between
   n. number patterns
   o. skip counting through the 8's
   p. recognize and write numbers greater than 1000
   q. recognize and write primes and composites
   r. Roman numberals
   s. exponential
   t. recognize and write inequalities
   u. squaring
   v. scientific
   w. percents

NUMBER THEORY

COLUMN 5

7. a. ones, tens
   b. number line
   c. expanded notation
   d. 100's
   e. two digit 10's and 1's
   f. three digit 1000's, 100's. 10's and 1's
   g. base 8
   h. 3 or more digits
   i. base 5
   j. base 2
   k. base 3, 12
   l. exponents
   m. powers
   n. squares
   o. square roots
   p. decimals
   q. scientific notation
8. _____
9. _____
10. a. common
    b. greatest common
    c. prime numbers
11. a. when to use
12. a. common
    b. least, greatest
    c. divisibility test
13. a. addition, subtraction
    b. multiplication, division
    c. slide rule
14. a. scale drawings
    b. comparisons
15. a. number line
16. a. number line
    b. absolute value
    c. comparing
17. a. decimal fractions to 100's
    b. decimal fractions to 1000's
18. a. occurance
    b. independent
    c. combined events
    d. empirical
    e. random sampling
    f. predictions
19. a. frequency distribution
    b. graphs
20. a. number lines
    b. comparing
    c. completeness property

COLUMN 6

1._____
2._____
3. a. 1. symbols
4._____
5._____
6. q. 1. relatively prime numbers
2. perfect numbers
v. 1. exponents
2. squaring
7. 1. 1. zero
2. negative
0. 1. estimation
2. rational approximations
q. 1. product, quotient
8._____
9.____
10._____
11.____
12. a. 1. least
13.---
14.____
15._____
16._____
17._____
18._____
19._____
20.)_____

MEASUREMENT*

COLUMN 4

1. Comparisons other than shape and number
2. Money
3. Time
4. Linear
5. Capacity
6. Weight
7. Graphs
8. Temperature
9. Systems of Measurement
10. Metric
11. Precision - accuracy
12. Areas
13. Precision
14. Accuracy

COLUMN 5

1. a. larger/smaller
2. a. 1 cent to 1 dime
   b. recognizing coins
   c. 1 cent to 1 dollar
   d. making change to one dollar
   e. recognize U.S. currency
   f. make change to $5.00
   g. addition, subtraction
   h. multiplication
   i. division
3. a. hour, half-hour, quarter-hour
   b. day, week, month, year
   c. measuring
   d. 1 day to 1 year
   e. calendar
   f. telling time
   g. second, year, century
   h. conversion within American system
   i. International
   j. latitude-longitude
4. a. inch
   b. half-inch
   c. measuring
   d. English ruler to ½"
   e. Foot and yard
   f. area
   g. conversion within American system
   h. surface area
5. a. cup, pint, quart
   b. equivalent amounts in American system
   c. volume
   d. ounce
6. a. equivalent amounts in American system
   b. measuring equivalent amounts in American system
   c. conversion within American system
7. a. bar
   b. number plane
   c. data
   d. graphing
   e. average
   f. line
   g. table of data
   h. construction
   i. ordered pairs
   j. double bar graphs
   k. range, average, mode, median
   l. interpretation
   m. rectangular coordinate systems
   n. linear functions
   o. linear inequalities
8. a. faharenheit degree
9. a. English
   b. Metric
10. a. recognition
    b. conversion within American system
    c. conversion outside the system
11. _____
12. a. lateral
    b. metric areas
13. a. greatest possible error
14. a. relative error

*Please note that in the math coding scheme each section of Column 3 has a separate coding for Columns 4 and 5.

MEASUREMENT*

COLUMN 5

1. a. 1. length
   2. height
   3. weight.
   4. inside/outside
   5. time
2. _____
3. _____
4. f. 1. formulas and measuring
5. c. 1. formulas and measuring
6. _____
7. a. 1. interpretation
   g. 1. formulation
   2. interpretation
   h. 1. ordered pairs
   2. coordinate system
   3. symmetry
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

COLUMN 6

1. a.r.a. calendar
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

GEOMETRY*

COLUMN 4

1. Comparison of Shape
2. Comparison of Size
3. Recognition
4. Identification
5. Naming regions
6. Line segments
7. Simple closed curves
8. Regions
9. Angles
10. Symmetry
11. Planes
12. Circles
13. Measurement
14. Volumne
15. Points
16. Polygons
17. Closed surfaces
18. Ellipse
19. Similarity - congruence
20. Points and Lines in a plane
21. Shapes
22. Triangles
23. Figures in space
24. Intersections in space
25. Construction

*In the math coding scheme each section of Column 3 has a separate coding for Columns 4 and 5.

GEOMETRY*

COLUMN 5

1. .___
2. ___
3. a. closed curve
   b. rectangular regions
   c. triangular regions
   d. square
4. ___
5. a. partial regions
   b. areas
6. a. properties
   b. measurement
   c. points, end points
   d. rays
   e. planes, space
   f. co-linear
   g. co-planer
   h. co-incident
   i. concurrent
7. a. identification
   b. construction
8. a. identification
   b. measurement
   c. areas
9. a. identification
   b. right angle
   c. perpendicular
   c. definition
   e. properties
   f. measuring
   g. construction
   h. linear pairs
   i. bisector
   j. straight
   k. vertical
   l. congruent
10. a. figures
    b. parallel
    c. congruence
    d. line
    e. axis
11. a. identification
    b. properties
    c. number planes
    d. co-linear
    e. co-planer
    f. co-incident
    g. concurrent
12. a. diameter, radius
    b. arc, chord
    c. construction
    d. circumference
    e. area
13. a. length
    b. perimeter
    c. area
    d. regions
    e. surface area
14. a. identification by shape
15. a. properties
    b. measuring
    c. co-linear
    d. co-planer
    e. co-incident
    f. concurrent
16. a. properties
    b. construction
    c. measurement
17. a. properties of polyhedrons
    b. characteristics
    c. intersections
18. a. properties
19. a. recognition of figures
    b. properties
    c. construction
20. a. properties
    b. relationships
    c. construction
    d. intersection
21. a. recognition
    b. definition
    c. construction
    d. properties
22. a. right, isoceles, equilateral
    b. construction
    c. ratio
    d. Pythoagorean Theorem
23. a. points
    b. lines
    c. planes
    d. tetrahedron and other pyramids
    e. prisms
    f. cones, cylinders
    g. spheres
    h. circles
24. a. lines and planes
25. a. segments
    b. polygons
    c. angles
    d. regions in a plane
    e. regions in space
    f. triangles
    g. prisms
    h. pyramids
    i. cones, cylinders, spheres
    j. circles

*In the math coding scheme each section of Column 3 has a separate coding for Columns 4 and 5.

GEOMETRY*

COLUMN 6

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. a. 1. circle, square, triangle, rectangle
   b. 1. protractor
      2. compass
8. _____
9. f. 1. protractor
10. _____
11. c. 1. data
      2. graphing
12. _____
13. c. 1. formula
    d. 1. formula
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. a. 1. length
    b. 1. perimeter, area
    c. 1. supplementary, complementary
       2. parallel, perpendicular
    d. 1. triangles
       2. quadrilaterals
       3. circles
    e. 1. right angles
       2. rectangular prisms
    f. 1. Pythagorean Theorem
       2. right triangles
    g. 1. surface area, volume
    h. 1. surface area, volume
    i. 1. surface area, volume
    j. 1. area, circumference

*In the math coding scheme each section of Column 3 has a separate coding for Columns 4 and 5.

NUMBER SENTENCES*

COLUMN 4

1. Equalities/inequalities
2. Sequence pictures
3. Symbols in number sentences
4. Families of facts
5. Measurement
6. Story Problems
7. Parentheses.
8. Logic
9. Quantifiers
10. Equations into variables
11. Equations, inequalities, phrases, statements
12. English sentences to number sentences
13. Systems of linear equations
14. Step-by-step problem solving procedures

9. _____
10. a. powers
11. _____
12. _____
13. a. graphing
    b. solution
14. _____

COLUMN 5

1. a. comparison
2. _____
3. a. $>, <, =, +, -, \times, \div, \neq$
4. _____
5. a. liquid
   b. money
   c. linear
   d. rates
   e. time
   f. volume
   g. metric
   h. capacity
   i. weights
   j. statistics
6. a. verbal, written
   b. completing picture problems
   c. writing from picture problems
   d. developing equations
   e. fractions
   f. 2 or more variables
   g. exponents
   h. developing inequalities
   i. decimals
7. a. associativity
   b. grouping
8. a. quantifiers
   b. conditionals
   c. negating statements
   d. compound statements
   e. biconditionals
   f. syllogistic deduction

"KEEPING ORDER"

PART III

CODING AUDIO-VISUAL MATERIALS

BEST COPY AVAILABLE

COMPUTERIZED CATALOGING AND RETRIEVAL SYSTEM

FOR AUDIO-VISUAL MATERIALS

PUEBLO ELEMENTARY SCHOOL

JUNE WORKSHOP 1972

STAFF UTILIZATION FOR CONTINUOUS

PROGRESS EDUCATION PROJECT

E.S.E.A. TITLE III

Developed by:

Christa Metzger

Revised: March, 1973

COMPUTERIZED CATALOGING AND RETRIEVAL SYSTEM FOR AUDIO-VISUAL MATERIALS

PUEBLO ELEMENTARY SCHOOL

Introduction

The cataloging of audio-visual instructional materials has traditionally been a complex and time-consuming task for school librarians. The emergence of an increasing number of totally unified learning resources centers, which combine services for books and non-book materials, has increased the need for an effective cataloging system for audio-visual materials.

The Scottsdale School District provides centralized acquisition and cataloging services for all elementary school library books. For non-print materials, however, no such services are now available. A computerized cataloging system for these materials was developed to meet this need and is now in operation in the Pueblo Elementary School Instructional Materials Center.

The system is very simple, using only an 80 column tab card, and may easily be adapted for use in any instructional resource center or library which has access to basic computer equipment, including a key punch, sorter and any basic computer.

It is the purpose of this pamphlet to describe this system in some detail. Basically, the pamphlet has two functions:

1) to serve as a guide to patrons of the IMC in the Pueblo Elementary School

2) to include sufficient technical data to allow implementation of the system in other school libraries/instructional resource centers.

Christa Metzger
Director, Pueblo IMC

Summary Overview of the System

1. All A-V materials are classified as are books, by the Dewey Decimal Classification System.

2. All pertinent information such as type of media, title, number of parts, grade level, publisher, physical specifications and subject heading is recorded to be punched into computer cards.

3. The following types of print-outs from the Data Processing Center are distributed so that teachers and students have full access to media information:

   3.1 Type of media listing
   3.2 Dewey classification listing
   3.3 Title listing (alphabetical)
   3.4 Subject heading listing (alphabetical)

4. In addition to these "book" catalog print-outs, the Data Processing Center prints 3 x 5 cards for each item cataloged. These are interfiled in the library card catalog, so that book and non-book resources may be easily identified from one source. Identification labels for shelving may also be obtained.

Advantages of a computerized cataloging system

1. More efficient and sophisticated retrieval of instructional resources.

2. Information is available to the user more rapidly and completely than with a manual system.

3. Simple repetitive routine tasks are reduced, thus relieving library personnel from such operations and freeing them to work more with people and the materials themselves.

4. Improved accuracy in cataloging.

5. Updating of materials collections is easy and information concerning newly acquired materials can be disseminated efficiently and rapidly.

6. Through various types of book print-outs, information is readily and easily available to the user.

7. Information output may be retrieved in various ways: (1) Print-outs according to classification numbers, subject headings, titles, type of materials, etc. (2) Computer-printed catalog cards which are interfiled in the central card catalog.

8. Materials listings according to specific needs and interests of users may be obtained.

9. Book catalogs (print-outs) provide instant reference in selection of recommendation for purchase of new materials. Areas of weakness can be quickly identified.

10. A complete, up-to-date financial picture is available at all times.

11. This type of system may be expanded to a total library automation system. Continuous evolvement and improvement is easily possible.

Description of the system--procedures (For further details see "Instructions to Librarians and Media Specialists", Appendix A.)

The System Flow Chart (Fig. 1) illustrates the major elements which make up the cataloging system operations. Each step is described below:

1. Resource materials - The data elements of all materials which are to be entered into the computer card are identified and recorded on the A-V Media Work Sheet. Information is obtained from the material itself and the producer's description and is recorded manually by the librarian and staff. The spaces marked "D.P. use only" contain the final coded and counted form of all elements to insure that the key punch operators are in no doubt about the nature and order of the component parts of the entries. This worksheet also serves as a request form for teachers in selection of materials (information is entered into spaces available, not "D.P. use" columns; library personnel will transfer the information in coded form to the "D.P. use" spaces). The specific data elements and codes will be discussed later in this paper.
2. Key punching - These media worksheets become the source documents for key punching. They are submitted to the Data Processing Center with a standard district data processing work request. Information from these sheets is punched into formated cards by the operators in the Center.
3. Master files - Two master files of the punched cards are kept: one in the Pueblo IMC, to be used as a shelf list, to add, delete and make changes; the other is in the Data Processing Center to be used for obtaining print-outs. Magnetic tape storage is available in the Scottsdale District Computer Center and data from the unit cards is stored on magnetic tapes. (Availability of magnetic tape storage is not essential to this system.)

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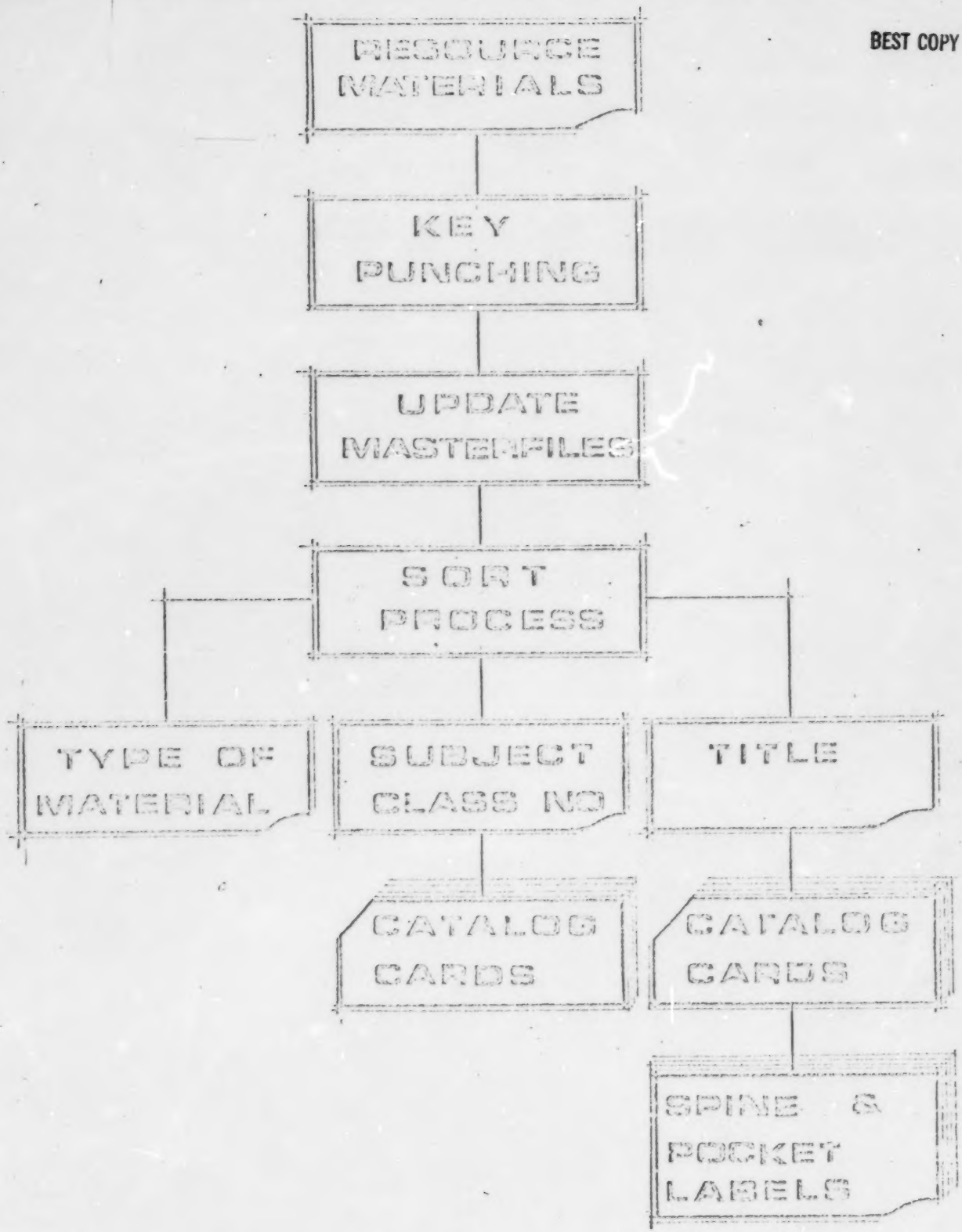

SYSTEM FLOW CHART (Figure 1)

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(Figure 2)

A-V MEDIA WORK SHEET

_____
School Name

D.P. Use only

1) School Number - 3 _____ 1 2 3

2) Media Code - 3 _____ 4 5 6

3) Storage Code - 2 _____ 7 8

4) Year Code (Acquisition) - 2 _____ 9 10

5) Print/Copy Number - 2 _____ 11 12

6) Call # Field - 6 _____ 13 14 15 16 17 18

7) Title - 30 (Short Title & Series)

_____

_____

D.P. Use _____

19 20 21

8) Level - 3 _____

9) Length Code Field (Duration, Quantity of Parts) - 3 _____

10) Producer/Publisher Code - 6 _____ 55 56 57 58 59 60

(11) Physical Specifications Field
Audio-playback speed or Video-Black & White (B)
or Color (C) - 1 _____ 61

Stereo (S) or Manaural (M) or Tape Tracks - 1 _____ 62

(12) Cost - 3 _____ 63 64 65

(13) Fund Source - 1 (NDEA-N, ESEA - E,)
(GIFT-G, SELF MADE-S) _____ 66

(14) Subject Heading - 14 _____ 67 68 69 70 71 72

_____ 73 74 75 76 77 78

_____ 79 80

4. Sorting - This is done in the computer center in a variety of ways, according to the type of output format desired. Entries are arranged into sequences by title, call number, subject heading, type of medium, etc., producing a book catalog in that sequence.

5. Output - Book catalogs are produced consisting of listings by title of materials (alphabetical order), by type of media, Dewey Decimal call number, and subject heading. Spirit duplicating masters may be obtained which allow for multiple reproduction to serve each classroom or learning area as well as the central school IMC.

In addition, two 3 x 5 catalog cards are produced by the computer center for each item. These are interfiled in the card catalog; one by title, the other by subject heading.

Up-to-date print-outs to include newly acquired materials, changes in data elements of existing materials, or specific print-outs requested by users for special needs (such as a particular subject area print-out, grade level appropriateness, etc.) may be obtained at any time depending on the workload of the data processing center. For our purposes, a yearly updating of print-outs has been sufficient. Work sheets for new materials are processed by the computer center during the early summer months.

Printed labels for identification and shelving of materials may also be obtained through the computer.

Data Elements and Codes

In the automation of cataloging, traditional rules and procedures of cataloging generally have been observed, although in a mechanized system certain rules, such as presenting information in a prescribed order on a car, becomes less crucial.

The following information is recorded for each item (refer to A-V Media Work Sheet - Fig. 2):

1. School Number
2. Media Code
3. Storage Code
4. Year Code
5. Print/Copy Number
6. Call Number
7. Title
8. Maturity (grade) level
9. Length or quantity of parts
10. Producer/Publisher
11. Physical specifications
12. Cost
13. Funds - Source
14. Subject Heading

As this system is specifically designed for non-book resources, no author space is allocated. Non-print materials are generally known by title and accredited to a producer or publisher rather than an author. When an author and title entry is required, as for a fiction record, for example, the "subject heading" space is used for one of them.

Most codes used are mnemonic and can easily be decoded by anyone familiar with educational media. Each book print-out given to staff members includes a sheet of the level codes (Fig. 4) and media codes (Fig.3) used.

ENTRY DESCRIPTIONS

1. School Number - Three (3) Characters
2. Media Code - Three (3) characters--to identify all possible media formats and combinations of these (see Fig.3).
3. Storage Code - Two (2) characters (numeric). Instructional materials are shelved according to the Dewey Decimal Classification numbers. However, physical specifications, such as size, impose storage limits. Individual filmstrip cans are placed in a hole drawer, but when a filmstrip is accompanied by a disc recording or cassette tape, it will be stored on a separate shelf. The numeric code assigned for storage identification depends primarily on the size of the media container. Sets containing filmstrips or filmstrips

MEDIA CODES

(Figure 3)

MEDIA CODE	MEDIA
AP	Art Print
BIB	Bibliography
BB	Booklets, Brochures
BC	Books with Cassettes
BR	Books with Records
BCF	Books, Cassettes, Filmstrips
BRF	Books, Records, Filmstrips
CAM	Cardsets (Magnetic striped flashcards)
C	Cassette Recording
CH	Chart
F	Film
FL	Film Loop
FS	Filmstrip
FSS	Filmstrip - Shortstrip
GL	Globe
KIT	Kits
MAP	Map
MCF	Microfiche
MF	Microfilm
MOD	Model
MS	Music Score
PIC	Picture (Study Prints)
PGM	Programmed Instruction Materials
REA	Realia
R	Record, Phonodisc
SGA	Simulation Game
SL	Slides
FSC	Sound Filmstrip with Cassette Tape Recording
FSR	Sound Filmstrip with Record
FST	Sound Filmstrip with Tape Recording
SG	Study Guides (Teacher's Manuals)
T	Tape Recording
TA	Teaching Aid (Examples: Flashcards, games cardboard thermometer, etc.)
TRA	Transparency
VTR	Video Tape Recording
VIE	Viewmaster
VM	Visual Master (printed originals for making overhead transparencies)
WBK	Workbook

(FIGURE 4)

LEVEL	LEVEL CODE
Preschool, Nursery, Kindergarten	K
Primary (Kindergarten - Grade 3)	P
Intermediate (Grade 4-6)	I
Junior High School (Grade 7-8)	J
Senior High School (Grade 9-12)	S
Teacher - Professional Content	T
General - Universal Application	G
Exceptional Children - Special Education	X
Grade 1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

with cassette tapes are perhaps the only exception and are all stored together regardless of size. The following numbers are used as storage codes: (The number represents the approximate size of the material)

(1) Single filmstrips (Example: FS-1)
(4) Cassette tapes (Example: C-4)
(8) Filmloops (Example: FL-8)
(12) Records, transparencies, visual masters (printed originals for making overhead transparencies), picture sets approximately twelve (12) inches high (Example: R-12, TRA-12)

(15) Filmstrip sets (boxes containing several filmstrips which are part of a unified set) filmstrip-record sets, filmstrip-cassette sets) (Example: FS-15, FSR-15, FSC-15).

(18) Picture sets approximately eighteen (18) inches high, study prints (Example PIC-18, AP-18).

(30) Any item, such as a kit or box requiring a larger and separate storage place, such as large posters or maps (Example: KIT-30).

Cabinets or shelves where materials are stored are labeled according to the storage code number so that students and teachers may easily locate materials.

4. Year Code - Two (2) characters--to show the date the item was entered (acquisitioned) into the center library.

5. Print/Copy Number - Two (2) characters--for purposes of scheduling or inventory--identifies the quantity of any particular title the center owns.

6. Call Number Field - Six (6) characters. The Dewey Decimal Classification system is employed, as this system is used for library books in the Scottsdale District.

7. Title - Thirty (30) characters. Official title from material itself used, including subtitles. Series titles should follow immediately to the right end of the title of each item within a series (series titles will usually need to be very much abbreviated, but must appear in order to identify the item as part of a set). A separate card is made for the title of a series or set followed by the word "set".

The total number of characters in the title field is 30. This is sufficient for most titles, although abbreviations may need to be used at times.

8. Level - A three (3) character field is used with the codes as shown in Fig. 4

9. Length code - Intended to measure the duration of a presentation or the quantity of parts of a set or series. It has a three (3) digit field.

> Filmstrip (or Sound Filmstrip) sets ... number of titles in the set
> Disc or tape recording ... playing time in minutes
> Film or Film Loops ... showing time in minutes
> Filmstrips (single) ... frames
> Transparent pictures & flat materials (slides, transparencies, study or art prints) ... number of parts in set
> Multi-media kits ... total items in kit

10. Producer/Publisher Code - Characters in field: Six (6). The main purpose of this code is to indicate the source for additional copies. Lists of coded names for producers of educational media are available, but as long as the librarian keeps a record of codes used, it is not essential to use such commercially-produced lists. Codes should resemble the actual names as closely as possible. For a listing of sample codes see Appendix A "Instructions to Librarians and Media Specialists."

Local productions may be included by naming the source person or group who developed the materials.

11. Physical Specifications - Field--two (2) characters. These will vary between types of media; they are specific to two broad classes of media; video materials and audio materials. The information is recorded as described on the A-V Media Work Sheet. The playback speed code requires only one space, as the first digit is sufficient to show the playback speed (Example: 33-1/3 RPM speed recording: code 3, 45 RPM speed : code 4, etc.).

12. Cost (approximate) - Three (3) numeric characters to state the price in whole dollars.

13. Funds-Source -- One (1) character (alphabetic code). This field is essential when a record must be kept of materials purchased with federal funds. This code may be expanded to other fund sources if needed.

14. Subject Heading - Fourteen (14) spaces are available for one subject heading--probably in abbreviated form. This subject heading will be typed, in unabbreviated form, on one set of the 3 x 5 cards which are interfiled in the library card catalog for use by students.

Steps in Processing of Materials

1. Complete the Media Work Sheet - when ordering, or after materials are received. A separate media work sheet must be made for each item in a set, so that individual titles may be retrieved easily. If the call number of an individual title varies from the call number of the total set, reference to that set title (abbreviated form) and its Dewey Classification number must be made in the "title field".

2. Identification labels and check-out cards - If identification labels are not computer produced, type labels and check out cards for containers and for the items within containers. Labels need to include only the following information for identification:

    1. Media code
    2. Storage code
    3. Dewey Decimal call number

Example:	FSR-15	FS-1	C-4
	930	398.2	921A

Check-out cards will show this identification number in the top lefthand corner. To aid students in locating A-V materials, the media code, storage code and call number on the catalog card in the library card catalog may be underlined or circled in red

3. Store materials in appropriate storage cabinets.

4. Take completed media work sheets to the computer center. Obtain print-outs and catalog cards from the computer center. Distribute print-outs to staff members and classrooms and interfile cards in card catalog.

5. A page showing sample catalog cards and a sample page of each type of print-out is attached. (Appendix B)

Conclusion

The automation system described for Pueblo is a workable, inexpensive answer to an immediate need. It is not an end. It is only the beginning in solving the complex problem of identification and dissemination of information.

APPENDIX A

Instructions to Librarians and Media Specialists

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Instructions to Librarians and Media Specialists

General Procedure

1. Complete an A-V Media Work Sheet for each item (instructions below)
2. Type identification labels and check-out cards (with pockets for boxes) for each item, giving the media code, storage code and call number,

   Example: FS-1
   398.2

3. Send the A-V media work sheets to the Data Processing Center for processing. You will receive the following types of print-outs from Data Processing:
   1. Two identical sets of 3 x 5 cards (two cards for each item) to interfile in your card catalog (you will have to type subject headings on one of the sets).
   2. Book print-outs by:

      Title (alphabetical)
      Call number (numerical)
      Type of media
      Subject heading (alphabetical)

4. An updated print-out may be obtained from Data Processing (with additions and deletions or errors corrected) once or twice a year according to your needs.

A-V Media Work Sheet (Fig. 2)

Enter all information on lines provided which are not marked "D.P. Use" ("rough draft" areas). When this information has been checked for accuracy, it should be entered into the "D.P. Use" spaces in coded and abbreviated form. These spaces must be completed clearly and legibly using capital letters (one

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letter per numbered space), as they are used by Data Processing for keypunching. To avoid confusion the numeral "0" must be shown "Ø". Be sure the capital letter "I" is shown as a Roman Numeral to avoid confusion with the Arabic numeral 1. A media sheet must be completed for each item. Fill out a sheet for a filmstrip set, for example, and for each filmstrip in the set. The set title to which a filmstrip belongs is indicated in abbreviated form in the title field (see instructions below).

Step-by-step procedure for completing each field

The number after each entry indicates how many spaces in the "D.P. Use" area are allocated for that particular field. Note directions for where to start filling in the codes in the "D.P. Use" spaces. The call number, for example, should be completed from left to right (start left), whereas in the cost field you must fill in the spaces at right first (start right).

1. School number (3) Start right -
   Use your school number

2. Media Code (3) Start right -
   Use the appropriate code from the attached sheet. (Media Codes - Fig.3)

3. Storage code (2) Start right -
   This depends somewhat on each school's set-up. If all A-V materials are stored in a central area, use the code below to identify the cabinet where media is stored (label cabinets with numbers). In high schools, numbers or letters may be used to indicate departments where materials are kept. Just be sure you know what your storage code means in your particular situation.

   Numbers for storage codes (the number represents the approximate size of the material)

   (1) Single filmstrips (Example: FS-1)
   (4) Cassette tapes (Example: C-4)
   (8) Filmloops (Example: FL-8)
   (12) Records, transparencies, visual masters (printed originals for making overhead transparencies), picture sets approximately twelve (12) inches high (Example: R-12, TRA-12)
   (15) Filmstrip sets (boxes containing several filmstrips which are part of a unified set) filmstrip-record sets, filmstrip-cassette sets) (Example: FS-15, FSR-15, FSC-15).

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(18) Picture sets approximately eighteen (18) inches high, study prints (Example PIC-18, AP-18).

(30) Any item, such as a kit or box requiring a larger and separate storage place, such as large posters or maps (Example: KIT-30).

4. Year Code (2) -
The last two digits of the year the material was received.

5. Print/copy number (2) Start right -
How many of this item you have. Complete only one sheet for an item even if you have multiple copies (this field will show how many you have).

6. Call number (6) Start left -
Dewey Decimal classification number assigned. All six spaces may be used for numbers, no period is necessary. For Fiction (such as story filmstrips) use the first three letters of the author's name.

7. Title (30) Start left -
Titles may need to be abbreviated to fit into the 30 spaces. Do not begin titles with "The", "A", or "An". The title of a set or series should be followed by a space with dash (-) and the word "SET". On media sheets which are parts of a set be sure to indicate the set title in abbreviated form after the title of the item which belongs to the set. If the set has a different call number from an individual title within the set, this call number should be indicated in this field (as it is essential in locating the individual item). If accession numbers need to be indicated for identification purposes, use this field for such numbers.

8. Level (3) Start right -
Use the level codes listed below

LEVEL	LEVEL CODE
Preschool, Nursery, Kindergarten	K
Primary (Kindergarten - Grade 3)	P
Intermediate (Grade 4-6)	I
Junior High School (Grade 7-8)	J
Senior High School (Grade 9-12)	S
Teacher - Professional Content	T
General - Universal Application	G
Exceptional Children - Special Education	X
Grade 1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
etc.	

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9. Length code field (3) (duration, quantity of parts) Start right -
   Indicates the duration of a presentation or the quantity of parts of a set or series (how many items belong to a particular set or kit, such as number of filmstrip titles in a set).

10. Producer/Publisher Code (6) Start left -
    Use code from the attached list. (Producers and Publishers Code, next 3 pages. Develop your own for any not listed. Continue using any you may already have developed. Just be sure to keep a record of each code you use.

11. Physical specifications (2) -
    Most of this is self-explanatory. Playback speed may be indicated with one numeral (example: 33-1/3 RPM speed recording: code 3, 45 RPM speed: Code 4, etc.).

12. Cost (3) (In whole dollars) Start right -
    Record cost on the "set" sheet only, not on each individual title of a set.

13. Funds - Source (1) -
    Self-explanatory. Everything left blank is assumed to be District-purchased.

14. Subject Heading (14) Start left -
    Because of space limitations only one subject heading can be used. Select the one which best meets your needs. Remember that many materials will be located by using the call number print-out. For fiction sets (such as story filmstrips) use this field to write the author's last name.

Use of Print-outs

Book print-outs may be bound into data processing folders. You may request several copies of each type of print-out so that these may be distributed in your school. A short training session for your teachers should be sufficient to help them learn how to locate media in the print-out. Students will primarily use the cards in the card catalog.

APPENDIX B

Sample Computer Cards and Print-Outs

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PRODUCERS AND PUBLISHERS OF EDUCATIONAL MATERIALS - ABBREVIATIONS

ABC	American Book Company
ACS	American Cancer Society
ADN	Addison-Wesley Publishing Co.
AISI	American Iron & Steel Institute
ALB	Allyn & Bacon,
ALESCO	American Library & Educational Services Co.
AMHER	American Heritage
ANIMAT	Animatic Productions
ATHINS	Athletic Institute
BELT	Beltone Electronics Corp.
BEN	Benefic Press
BIOSCO	Bioscope Manufacturing Company
BOMAR	Bomar Records
BORGWA	Borg Warner
BRL	Behavioral Research Laboratories
CAPITL	Capital Records
CARAVL	Caravel Films
CCOLA	Coca Cola Company
CHILDC	Childcraft
CNCPTR	Concept Records
COLGAT	Colgate-Palmolive
CORONT	Coronet Instructional Materials
COMMA	Communication Materials Exchange
CROWN	Crown Records
DDD	Doubleday & Company
DENG	Denoyer-Geppert
DISNEY	Walt Disney
DPICTO	Depicto Films
EAV	Educational Audio Visual
EBEC	Encyclopedia Britannica Educ. Corp
EDA	Educational Activities
EDL	Educational Developmental Laboratories
EDUC	Educational Record Sales
EEM	Educational Enrichment Materials
ERS	Educational Reading Service
EYEGT	Eye-Gate
FEI	Field Educ. Publ.
FOLKW	Folkways/Scholastic
FSH	Filmstrip House
GINN	Ginn and Company
GODWIN	Dwight Godwin Prod.
GOLDEN	Golden Records
GPO	Government Printing Office

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HAMM	Hammond
HANDY	Jim Handy Organ
HARCOL	Harmony Columbia
HBW	Harcourt Brace & World Co.
HMM	Houghton Mifflin Co.
HOCTOR	Hoctor Educational Records
HPR	Harper & Row
HRW	Holt Rinehart & Winston
INSTR	Instructor
INTAC	Interaction Productions
JET	Jet Propulsion Lab
KIMBO	Kimbo Records
LFC	Library Filmstrip Center
MAC	Macmillan Co.
MCG	McGraw-Hill
MEDIA	Media Center
MIK	Millikin Publishing Co.
MILBRO	Miller-Brody
MILLER	Miller, Edward M. Assoc.,
MMM	3M - Minnesota Mining & Mineral
NGS	National Geographic Society
PCB	Publishers Central Bureau
PELLON	Pellon Corp., Educ. Dept.
PHH	Prentice Hall
PLA	Plays, Incorporated
PS	Popular Science
PSFOM	Popular Science - Filmstrip of the Month
PYC	Peabody, George College
RAN	Random House
RCA	R.C.A. Victor
RMC	Rand McNally
ROBIN	Robin Hood
RHYREC	Rhythm Record Co.
SA	Spoken Arts
SCF	Scott, Foresman & Co.,
SCHLFS	Scholastic Book Services
SEARSR	Sears Roebuck & Co.
SHORT	Storytoons, Inc.
SIL	Silver Burdett Company
SRA	Science Research Assn.
STK	Steck-Vaughn Co.
SVE	Society for Visual Education
SWIFT	Swift & Company
TETO	Teaching Tools
TIME	Time/Life Education
TROLL	Troll Assoc.

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UN	United Nations
UNIV	Universal Ed. & Visual Arts
US	U.S. State Department
VANR	Reinhold Pub. Corp.
VEC	V.E.C.. Madison, Wisc. (Visual Education Consultants)
VSCI	Visual Sciences
WEBER	Weber Castello
WESTON	Weston Woods
WESTPU	Western Publishing Co.
WLD	World Publishing Co.
WOLL	Wollensak Teaching Tapes
WTS	Watts, Franklin

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COMPUTER PRODUCED CATALOG CARDS

TITLE: EARTH & ITS MOVEMENTS-UEU 523

I.D.#: FSR-15 CALL #: 525

LEVEL: IJ LENGTH: 53

PRODUCER/PUBLISHER CODE: SVE

PHYSICAL SPECIFICATIONS: C

COST$: 8 FUNDS: EDSA-II

SUBJECT HEADING: ASTRONOMY SCH #: 20

TITLE CARD

TITLE: UNDERSTAND EARTH & UNIV-SET

I.D.#: FSR-15 CALL #: 523

LEVEL: IJ LENGTH: 6

PRODUCER/PUBLISHER CODE: SVE

PHYSICAL SPECIFICATIONS: C

COST$: FUNDS: EDSA-II

SUBJECT HEADING: ASTRONOMY SCH #: 20

TITLE CARD (SET CARD)

TITLE: EARTH & ITS MOVEMENTS-UEU 523

I.D.#: FSR-15 CALL #: 525

LEVEL: IJ LENGTH: 53

PRODUCER/PUBLISHER CODE: SVE

PHYSICAL SPECIFICATIONS: C

COST$: 8 FUNDS: EDSA-II

SUBJECT HEADING: ASTRONOMY SCH #: 20

SUBJECT CARD

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PRINT-OUT BY TYPE OF MEDIA

LOCATION: 20-PUEBLO DATE: 3/23/73 AUDIO-VIS

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE	AL SOFT LEVEL
CH	30	71	04	511	FRACTION CHART	IJ
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2	J
FL	8	71	1	5412	ATOMS TO MOLECULES #1	J
FL	8	71	01	574	AMOEBA	I
FL	8	71	01	5513	STORY THE EARTH TELLS	PI
FL	8	71	01	574	BUDDING OF YEAST CELLS	I
FL	8	72	1	595	BRINE SHRIMP I	PI
FL	8	71	01	5513	STRANGE ROCK & LAND FORMAT	PIJ
FL	8	72	1	591	SIMILARITY	I
FL	8	72	1	582	BEAN SPROUTS	PI
FL	8	72	1	595	BRINE SHRIMP II	PI
FL	8	71	01	535	LIGHT-COLORS	IJ
FL	8	71	01	541	CHEMICAL & PHYSICAL CHANGE	IJ
FL	8	71	1	576	COMP SIZE MICROSCOPIC ANIMALS	IJ
FL	8	71	01	597	TADPOLE TO TOAD	PIJ
FL	8	71	01	6497	LEARNING WHEN AND WHERE	PIJ
FL	8	71	01	535	LIGHT & COLOR-REFLECTION	JKS
FL	8	71	01	549	LET'S LOOK AT ROCKS	PI
FL	8	72	1	581	CARNIVOROUS PLANTS	IJ
FL	8	72	1	5918	MITOSIS-WHITEFISH EMBRYO	J
FL	8	71	01	533	MOUSE & CANDLE	PI
FL	8	72	1	5819	DESERT FLOWERS	G
FL	8	71	01	574	EUGLENA	I
FL	8	72	1	511	MODELS:WHEN TO ADD OR SUBTRACT	I
FL	8	72	1	581973	DESERT PLANTS	I
FL	8	72	1	7964	UNEVEN PARALLEL BARS-PTS 1-5	G
FL	8	72	1	7964	UNEVEN PARALLEL BARS-PTS 6-9	G
FL	8	72	1	59812	DESERT SNAKES	I
FL	8	72		5978	FROG EGG PART 2	IJ
FL	8	72	1	5978	FROG EGG PART 3	IJ
FL	8	72		5978	FROG EGG PART 1	IJ
FL	8	72	1	511	FRACTIONAL PARTS	I
FL	8	71	01	6497	PEOPLE ARE DIFFER AREN'T THEY	PIJ
FL	8	71	01	581	PLANT GROWTH-GRAPHING	P
FL	8	72	1	5514	GEOGRAPHIC CAUSES OF DESERTS	IJ
FL	8	71	01	5514	GRAND CANYON RIVER	IJH
FL	8	71	01	574	PARAMECIUM	I
FL	8	71	01	616	X-RAY MOTION PICT KNEE ELBOW	IJ
FL	8	71	01	59578	RAISING BUTTERFLY LARVAE	IJ
FL	8	71	01	591	HOW ANIMALS COMMUNICATE	PIJ
FL	8	71	01	574	RHIZOPUS	IJ
FL	8	72	1	576	ROTIFIER	J
FL	8	72	1	576	RAIS MICROSCOP WATER ANIMALS	PIJ
FRS	15	70	01	CAL	CALDECOTT-BABY BUNTING-10C	PI
FRS	15	71	1	572	MIDEAST:WAY STA MANSLONG JOUR	IJS
FS	1	71	01	9737	ABE LINCOLN IN INDIANA	IJ
FS	15	71	01	921A	ADAMS, JOHN QUINCY	IJ
FS	15	71	01	921A	ALCOTT, LOUISA MAY	JS
FS	15	71	01	921	AMERICAN AUTHORS-SET	JS
FS	01	53	04	678	A CLASS STUDIES RUBBER	IJ

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LEVEL	LGTH	PRO/ PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
IJ		MEDIA	C	8	EDSA-II	MATHFRACTION
J		MCG			EDSA-II	CHEMISTRY
J		MCG	C		DISTRICT	CHEMISTRY
I	4	MCG	C	15	EDSA-II	MICROSCOPY
PI	4	TROLL	C	25	NDEA-III	GEOLOGY
I	4	MCG	C	15	EDSA-II	YEAST
PI		MCG	C	15	EDSA-II	SHRIMP
PIJ	4	TROLL	C	22	NDEA-III	GEOLOGY
PI		MAC	C	21	NDEA-III	MATH
PI		MCG	C	15	EDSA-II	SEEDS
PI		MCG	C		DISTRICT	SHRIMP
IJ	3	UNIV	C	14	NDEA-III	LIGHT
IJ	4	UNIV	C	20	NDEA-III	CHEMISTRY
IJ		MCG	C	15	EDSA-II	MICROBIOLOGY
PIJ	2	DOD	C	23	NDEA-III	FROGS
PIJ	4	TROLL	C	25	NDEA-III	BEHAVIOR
JHC	1	DOD	C	22	NDEA-III	LIGHT
PI	4	TROLL	C	25	NDEA-III	ROCKS
IJ		ALESCO	C	19	EDSA-II	PLANTS
J	2	MCG	C	23	EDSA-II	MICROSANIMAL
PI	4	MCG	C	15	NDEA-III	PHYSICS
G		DISNEY	C	24	EDSA-II	FLOWERSPLANT
I	4	MCG	C	15	EDSA-II	MICROSCOPY
I		MAC	C	21	NDEA-III	MATH
I		ALESCO	C	23	EDSA-II	PLANTSDESERT
G		ATHINS	C	19	EDSA-II	GYMNASTICS
G		ATHINS	C	19	EDSA-II	GYMNASTICS
I		ALESCO	C	21	EDSA-II	RATTLESNAKES
IJ		MCG	C	15	EDSA-II	EGGS
IJ		MCG	C	15	EDSA-II	EGGS
IJ		MCG	C	15	EDSA-II	EGGS
I		MAC	C	21	NDEA-III	MATH
PIJ	4	TROLL	C	25	NDEA-III	BEHAVIOR
P	4	MCG	C	15	NDEA-III	BOTANY
IJ		DOUBLE	C	21	NDEA-III	DESERT
IJH		DISNEY	C	23	NDEA-III	ARIZGEOGRAPH
I	4	MCG	C	15	EDSA-II	MICROSCOPY
IJ	3	UNIV	C	13	NDEA-III	MEDICINE
IJ		ALESCO	C	20	NDEA-III	BUTTERFLIES
PIJ	4	TROLL	C	25	NDEA-III	ANIMALSHABBE
IJ	4	MCG	C	15	EDSA-II	MOLDS
J		MCG	C	15	EDSA-II	MICROBIOLOGY
PIJ	3	MCG	C	23	EDSA-II	MICROSCOPY
PI		WESTON	C		DISTRICT	TITLE
IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
IJ			C	6	NDEA-III	LINCOLN ABE
IJ	52	EBEC	B	3	NDEA-III	PRESIDENTSUS
JS		MCG	C	6	NDEA-III	AUTHOR AMER
JS	6	MCG	C		NDEA-III	BIOGRAPHY
IJ	49	PYRSTN	B		DISTRICT	RUBBER

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PRINT-OUT BY TITLE (ALPHABETICAL ORDER)

LOCATION: 20-PUEBLO — DATE: 5/28/73 — AUDIO-VISUAL SOF

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE	LEVE
FS	1	70	1	5976	AMPHIBIANS	IJ
R	12	57	01	65883	ANATOMY OF A SALE	JS
FSP	15	70	01	930	ANCIENT TIMES-SET	I
R	12	71	01	7961	AND THE BEAT GOES ON FOR PM ED	PIJ
FSP	15	71	01	9737	ANDREW JOHNSON AND CONGRESS	IJ
FS	1	72	1	516	ANGLES & MORE ANGLES	PI
FS	01	54	01	5915	ANIMAL HOMES	P
FS	01	51	01	590	ANIMAL KINGDOM	PIJ
FS	01	65	01	594	ANIMAL LIVES IN LITTLE HOUSE	P
FSC	15	71	01	591	ANIMALS HOME IN DESERT NS-574	PIJ
FS	01	66	01	5951	ANT-A SOCIAL INSECT	IJ
KIT	30	71	1	372412	APPLE IS RED-EARLY CHD SERIES	P
FS	15	71	01	953	ARAB WORLD & ISLAM-DHFP900	IJ
R	12	71	01	3982	ARABIAN NIGHTS	PIJ
FSP	15	70	01	ARD	ARIZZONE-TIM & SEA CAPTAIN-11	PI
FSR	15	70	01	353975	ARIZONA STATE CAPITAL TOUR	J
VM	12	71	01	3737	ARMIES CLASH. 1862-1863	IJS
FS	01	70	01	6451	ARMSTRONG FACT FILE ON FLOORS	JS
FS	15	71	01	91009	AROUND WORLD WITH MAGELLAN	PI
AP	30	71	04	700	ART PTF-COL MOVEM PERCEP SPACE	G
TRA	12	71	01	915	ASIA MAP OUTLINES - SET	G
VM	12	71	01	784	ASSEMBLY SINGING-M780	G
FSR	15	71	01	30142	AT HOME - YNW300	P
FS	15	72	1	300	AT HOME IN CITY AND FARM-LOME	P
FSR	15	71	01	370	AT SCHOOL - YNW300	P
FS	15	72	1	300	AT WORK IN THE CITY-LOME	P
FS	15	72	1	300	AT WORK ON THE FARM-LOME	P
V.	12	71	01	909	ATLAS OF WORLD HISTORY-PTIV	IJS
VM	12	72	1	9126	ATLAS-CENTRAL & SO AFRICA	IJ
VM	12	72	1	912	ATLAS-FAR EAST & NO AFRICA	IJ
VM	12	72	1	912	ATLAS-LATIN AMER NO-SO POLAR R	IJ
FS	1	71	01	5412	ATOMS AND MOLECULES	IJ
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2	J
FL	8	71	1	5412	ATOMS TO MOLECULES #1	J
FS	01	64	01	551525	AUTUMN-FOUR SEASONS	P
FSC	15	71	01	AVE	AVERILL-JENNY BIRTHDAY BOOK-SC	PI
C	15	72		921R	BABE RUTH-CHAMPIONS ALL	PI
R	12	71	01	785	BACH, CPE, HARPSICHORD & CODE	G
FS	01	63	01	5899	BACTERIA	I
C	4	71	01	9218	BAL904	PI
FS	15	71	01	91009	BALBOA DISCOVERS THE PACIFIC	PI
C	4	71	01	9218	BANNEKER, BENJAMIN	IJ
VM	12	71	01	781	BASIC RHYTH PATT - PT1 - M780	G
VM	12	71	01	781	BASIC RHYTH PATT - PT2 -M780	G
R	12	65	01	3719	BASIC SONG EXCPTNL CHILDRN-SET	P
FS	01	66	01	511	BASIC SUBSETS & EMPTY SET	P
FS	01	58	01	6415	BATTER BREADS	JS
FS	1	70	2	BAU	BAUM-ROAD TO LAND OF OZ	P
FL	8	72	1	582	BEAN SPROUTS	PI
FS	1	70	2	6415	BEAUTIFUL CAKES	JS

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AUDIO-VISUAL SOFTWARE (MEDIA) INVENTORY — PROGRAM NO: ME013A — PAGE: 2

	LEVEL	LGTH	PRO/ PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
LE	IJ		EBEC	C		DISTRICT	AMPHIBIANS
ET	JS		MILLER			DISTRICT	MARKET RESEA
ES ON FOR CH ED	I	05	EBF	C		DISTRICT	HIST ANCIENT
AND CONGRESS	PIJ		EAI		12	EDSA-II	PHYSICAL ED
NGLES	IJ	89	EBEC	C	12	NDEA-III	USPRESIDENTS
	PI		TROLL	C	7	EDSA-II	ARITHMETIC
	P	30	PSFOM	C		DISTRICT	ANIMALHABBEH
LITTLE HOUSE	PIJ	42	PSFOM	C		DISTRICT	ANIMALS
DESERT NS-574	P	30	PSFOM	C		DISTRICT	MOLLUSKS
SECT	PIJ	74	DISNEY	C	13	EDSA-II	DESERT
LY CHD SERIES	IJ	42	PSFOM	C		DISTRICT	INSECTS
LAM-OHFP300	P	3	BCMAR	C		EDSA-II	
	IJ		TROLL	C	6	NDEA-III	ISLAM
SEA CAPTAIN-II	PIJ		HILBRO		6	NDEA-III	FOLKLOREARAB
APITAL TOUR	PI		WESTON	C		DISTRICT	TITLE
362-1-80	J		ASTATE	C		DISTRICT	ARIZ COVER
FILE ON FLOORS	JS		MMM	B	3	NDEA-III	CIVIL WAR
TH MAGELLAN	JS		ARMSTG	C		DISTRICT	FLOOR COVER
EM PERCEP SPACE	PI		TROLL	C	6	NDEA-III	MAGELLEN
ES - SET	G		VANR	C	108	EDSA-II	ART
3-M780	G	20	MIK	C	7	NDEA-III	ASIA GEOGRAP
D	G		MMM	B		EDSA-II	MUSIC VOCAL
AND FARM-LOME	P		KIMBO	C	8	NDEA-III	FAMILY LIFE
300	P		EBEC	C		NDEA-III	SOC SCIENCES
CITY-LOME	P		KIMBO	C	8	NDEA-III	SCHOOL
FARM-LOME	P		EBEC	C		NDEA-III	SOC SCIENCES
HISTORY-PTTV	P		EBEC	C		NDEA-III	SOC SCIENCES
SO AFRICA	IJS		MMM	B	3	NDEA-III	HIST WORLD
NO AFRICA	IJ	23	MMM	B	2	EDSA-II	AFRICA
NO-SO POLAR R	IJ	23	MMM	B	2	EDSA-II	FAREASTAFRIC
ULES	IJ	23	MMM	B	2	EDSA-II	LAMERNOSOPOL
LES - PART 2	IJ	46	SVE	C	5	EDSA-II	CHEMISTRY
LES #1	J		MCG			EDSA-II	CHEMISTRY
ONS	J		MCG	C		DISTRICT	CHEMISTRY
IRTHDAY BOOK-SC	P	33	FSH	C		DISTRICT	SEASONS
ONS ALL	PI		WESTON	C	8	EDSA-II	TITLE
SICHORD & CHOE	PI		TROLL			EDSA-II	SPORTBIOGRAP
	G		RCA		2	EDSA-II	MUSIC INSTRU
	I	52	EBF	C		DISTRICT	BACTERIOLOGY
S THE PACIFIC	PI		TROLL		5	NDEA-III	EXPLORERS
MIN	PI		ERS	C	6	NDEA-III	EXPLORERS
- PT1 - M780	IJ		TROLL		5	NDEA-III	NEGROES BIO
T - PT2 -M790	G		MMM	B		EDSA-II	MUS RHYTHM
NL CHILDRN-SET	G		MMM	B		EDSA-II	MUS RHYTHM
EMPTY SET	P	3	CNCPTR			DISTRICT	SONGS
	P	35	GINN	B		DISTRICT	ARITHMETIC
NO OF 02	JS	74	GMILLS	C		DISTRICT	FOOD PREPARA
"	P		PSFON	C		DISTRICT	TITLE
	PI		MCG	C	15	EDSA-II	SEEDS
	JS		GMILLS	C		DISTRICT	FOOD PREPARA

PRINT-OUT BY DEWEY DECIMAL CLASSIFICATION NUMBER (NUMERICAL ORDER)

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LOCATION: 20-PUEBLO DATE: 3/23/73 AUDIO-VISU

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE	L SOF
FS	15	71	01	529	OUR TIME CALENDAR-NEW 59C	
FSS	12	71	01	529	WHAT DAY IS IT-ESSOD	P
FSS	12	71	01	529	WHEN NIGHT COMES-ESSOD	P
R	12	71	01	530	SIGHTS AND SOUNDS	P
FS	1	71	01	530	EXPERIMENTS WITH LENGTH	P
FSS	12	71	01	530	POWER MOVES THINGS - ESSOD	JS
FS	01	58	01	5308	BIG•SMALL•SHORT AND TALL	P
FS	01	70	01	5308	BIG-LITTLE THINGS-SIZE CONCT	P
FS	1	71	01	531	EXPERIMENTS WITH MASS	PI
FS	1	71	01	532	EXPERIMENTS W VOLUME & DENSI	JS
FL	8	71	01	533	MOUSE & CANDLE	JS
FS	01	65	01	53362	MOTION AND FORCE	PI
FS	01	65	01	53362	PHYSICAL REACTIONS	IJ
FS	1	63	01	534	SOUNDS THAT WE HEAR	IJ
FS	01	66	01	535	BENDING LIGHT	P
FL	8	71	01	535	LIGHT & COLOR-SPECTRUM	IJ
FL	8	71	01	535	LIGHT-ECLIPSES	JHC
FS	01	59	01	535	HOW LIGHT TRAVELS	IJ
FS	01	64	01	53721	STATIC ELECTRICITY	IJ
FS	01	58	01	53721	STATIC ELECTRICITY	IJ
FS	01	64	01	541	SIMPLE CHEMICAL REACTIONS	IJ
FL	8	71	01	541	CHEMICAL & PHYSICAL CHANGE	IJ
FL	8	71	1	5412	ATOMS TO MOLECULES #1	IJ
FS	1	71	01	5412	ATOMS AND MOLECULES	J
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2	IJ
FS	1	71	01	54139	CHEMICAL CHANGES	J
FS	1	71	01	546	WHAT THINGS ARE MADE OF	IJ
FS	01	64	01	5485	HOW CRYSTALS ARE FORMED	IJ
FL	8	71	01	549	LET'S LOOK AT ROCKS	IJ
PIC	18	71	01	549	IMPORTANT MINERALS	PI
FSC	15	71	1	550	LIFE STORY-SET	PI
FS	15	71	01	550	MEASUR OUR WORLD-SET	PI
FSR	15	71	01	550	OUR PLANET EARTH-SET	PI
FSS	12	71	01	550	OUR PLANET EARTH-ESSOD	IJ
TRA	12	72	1	551	STRUCTURE OF THE EARTH	P
FS	15	71	01	551	WHAT UNDER CITY STREET	IJ
FS	15	71	01	551	WHAT UNDER FARMER GARDEN	PI
FS	15	71	01	551	WHAT UNDER OCEAN	PI
FS	15	71	01	551	WORLD BELOW US-SET	PI
FS	15	71	01	551	WHAT UNDER EARTH	PI
FS	01	65	01	551	HOW THINGS CHANGE	PI
FSR	15	71	01	5511	HOW EARTH WAS FORMED-OPESD	P
FS	01	66	01	5512	VOLCANOES AND EARTHQUAKES	IJ
FL	8	71	01	5513	STORY THE EARTH TELLS	IJ
FL	8	71	01	5513	STRANGE ROCK & LAND FORMAT	PI
FSC	15	71	01	5513	WATER IN THE DESERT NS-574	PI
FS	15	72	1	5514	CHANGING FACE OF EARTH-MEN	PI
FS	15	72	1	5514	CLIMATES OF THE EARTH-MEN	P
FS	15	72	1	5514	LIVING IN DIFFERENT PLACES-ME	P
FS	15	72	1	5514	MANS EARTH HOME-SET	P

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PRINT-OUT BY TYPE OF MEDIA

LOCATION: 20-PUEBLO DATE: 3/23/73 AUDIO-VISUAL

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE
CH	30	71	04	511	FRACTION CHART
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2
FL	8	71	1	5412	ATOMS TO MOLECULES #1
FL	8	71	01	574	AMOEBA
FL	8	71	01	5513	STORY THE EARTH TELLS
FL	8	71	01	574	BUDDING OF YEAST CELLS
FL	8	72	1	595	BRINE SHRIMP I
FL	8	71	01	5513	STRANGE ROCK & LAND FORMAT
FL	8	72	1	511	SIMILARITY
FL	8	72	1	582	BEAN SPROUTS
FL	8	72	1	595	BRINE SHRIMP II
FL	8	71	01	535	LIGHT-COLORS
FL	8	71	01	541	CHEMICAL & PHYSICAL CHANGE
FL	8	71	1	576	COMP SIZE MICROSCOPIC ANIMALS
FL	8	71	01	597	TADPOLE TO TOAD
FL	8	71	01	6497	LEARNING WHEN AND WHERE
FL	8	71	01	535	LIGHT & COLOR-SPECTRUM
FL	8	71	01	549	LET'S LOOK AT ROCKS
FL	8	72	1	581	CARNIVOROUS PLANTS
FL	8	72	1	5918	MITOSIS-WHITEFISH EMBRYO
FL	8	71	01	533	MOUSE & CANDLE
FL	8	72	1	5819	DESERT FLOWERS
FL	8	71	01	574	EUGLENA
FL	8	72	1	511	MODELS:WHEN TO ADD OR SUBTRACT
FL	8	72	1	581973	DESERT PLANTS
FL	8	72	1	7964	UNEVEN PARALLEL BARS-PTS 1-5
FL	8	72	1	7964	UNEVEN PARALLEL BARS-PTS 6-9
FL	8	72	1	59812	DESERT SNAKES
FL	8	72		5978	FROG EGG PART 2
FL	8	72	1	5978	FROG EGG PART 3
FL	8	72		5978	FROG EGG PART 1
FL	8	72	1	511	FRACTIONAL PARTS
FL	8	71	01	6497	PEOPLE ARE DIFFER AREN'T THEY
FL	8	71	01	581	PLANT GROWTH-GRAPHING
FL	8	72	1	5514	GEOGRAPHIC CAUSES OF DESERTS
FL	8	71	01	5514	GRAND CANYON RIVER
FL	8	71	01	574	PARAMECIUM
FL	8	71	01	616	X-RAY MOTION PICT KNEE ELBOW
FL	8	71	01	59578	RAISING BUTTERFLY LARVAE
FL	8	71	01	591	HOW ANIMALS COMMUNICATE
FL	8	71	01	574	RHIZOPUS
FL	8	72	1	576	ROTIFIER
FL	8	72	1	576	RAIS MICROSCOP WATER ANIMALS
FRS	15	70	01	CAL	CALDECOTT-BABY BUNTING-10C
FRS	15	71	1	572	MIDEAST:WAY STA MANSLONG JOUR
FS	1	71	01	9737	ABE LINCOLN IN INDIANA
FS	15	71	01	921A	ADAMS, JOHN QUINCY
FS	15	71	01	921A	ALCOTT, LOUISA MAY
FS	15	71	01	921	AMERICAN AUTHORS-SET
FS	01	53	04	678	A CLASS STUDIES RUBBER

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AUDIO-VISUAL SOFTWARE (MEDIA) INVENTORY PROGRAM NO: MED13A PAGE: 3

	LEVEL	LGTH	PRO/ PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
LES - PART 2	IJ		MEDIA	C	8	EDSA-II	MATHFRACTION
LES #1	J		MCG			EDSA-II	CHEMISTRY
	J		MCG	C		DISTRICT	CHEMISTRY
TELLS	I	4	MCG	C	15	EDSA-II	MICROSCOPY
T CELLS	PI	4	TROLL	C	25	NDEA-III	GEOLOGY
	I	4	MCG	C	15	EDSA-II	YEAST
LAND FORMAT	PI		MCG	C	15	EDSA-II	SHRIMP
	PIJ	4	TROLL	C	22	NDEA-III	GEOLOGY
	PI		MAC	C	21	NDEA-III	MATH
	PI		MCG	C	15	EDSA-II	SEEDS
	PI		MCG	C		DISTRICT	SHRIMP
ICAL CHANGE	IJ	3	UNIV	C	14	NDEA-III	LIGHT
SCOPIC ANIMALS	IJ	4	UNIV	C	20	NDEA-III	CHEMISTRY
	IJ		MCG	C	15	EDSA-II	MICROBIOLOGY
ND WHERE	PIJ	2	DDD	C	23	NDEA-III	FROGS
ECTRUM	PIJ	4	TROLL	C	25	NDEA-III	BEHAVIOR
OCKS	JKS	1	DDD	C	23	NDEA-III	LIGHT
NTS	PI	4	TROLL	C	25	NDEA-III	ROCKS
SH EMBRYO	IJ		ALESCO	C	19	EDSA-II	PLANTS
	J	2	MCG	C	23	EDSA-II	MICROSANIMAL
	PI	4	MCG	C	15	NDEA-III	PHYSICS
	G		DISNEY	C	24	EDSA-II	FLOWERSPLANT
ADD OR SUBTRACT	I	4	MCG	C	15	EDSA-II	MICROSCOPY
	I		MAC	C	21	NDEA-III	MATH
BARS-PTS 1-5	I		ALESCO	C	23	EDSA-II	PLANTSDESERT
BARS-PTS 6-9	G		ATHINS	C	19	EDSA-II	GYMNASTICS
	G		ATHINS	C	19	EDSA-II	GYMNASTICS
	I		ALESCO	C	21	EDSA-II	RATTLESNAKES
	IJ		MCG	C	15	EDSA-II	EGGS
	IJ		MCG	C	15	EDSA-II	EGGS
	IJ		MCG	C	15	EDSA-II	EGGS
S	I		MAC	C	21	NDEA-III	MATH
ER AREN'T THEY	PIJ	4	TROLL	C	25	NDEA-III	BEHAVIOR
APHING	P	4	MCG	C	15	NDEA-III	BOTANY
ES OF DESERTS	IJ		DOUBLE	C	21	NDEA-III	DESERT
VER	IJH		DISNEY	C	23	NDEA-III	ARIZGEOGRAPH
	I	4	MCG	C	15	EDSA-II	MICROSCOPY
CT KNEE ELBOW	IJ	3	UNIV	C	13	NDEA-III	MEDICINE
FLY LARVAE	IJ		ALESCO	C	20	NDEA-III	BUTTERFLIES
MUNICATE	PIJ	4	TROLL	C	25	NDEA-III	ANIMALSHABBE
	IJ	4	MCG	C	15	EDSA-II	MOLDS
	J		MCG	C	15	EDSA-II	MICROBIOLOGY
WATER ANIMALS	PIJ	3	MCG	C	23	EDSA-II	MICROSCOPY
BUNTING-10C	PI		WESTON	C		DISTRICT	TITLE
MANSLONG JOUR	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
INDIANA	IJ			C	6	NDEA-III	LINCOLN ABE
NCY	IJ	52	EBEC	B	3	NDEA-III	PRESIDENTSUS
MAY	JS		MCG	C	6	NDEA-III	AUTHOR AMER
PS-SET	JS	6	MCG	C		NDEA-III	BIOGRAPHY
S RUBBER	IJ	49	FYRSTN	B		DISTRICT	RUBBER

PRINT-OUT BY TITLE (ALPHABETICAL ORDER)

LOCATION: 20-PUEBLO DATE: 3/23/73 AUDIO-VISU

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE
FS	1	70	1	5976	AMPHIBIANS
R	12	57	01	65883	ANATOMY OF A SALE
FSR	15	70	01	930	ANCIENT TIMES-SET
R	12	71	01	7061	AND THE BEAT GOES ON FOR PU CO
FSR	15	71	01	9737	ANDREW JOHNSON AND CONGRESS
FS	1	72	1	510	ANGLES & MORE ANGLES
FS	01	54	01	5915	ANIMAL HOMES
FS	01	61	01	590	ANIMAL KINGDOM
FS	01	65	01	594	ANIMAL LIVES IN LITTLE HOUSE
FSC	15	71	01	591	ANIMALS HOME IN DESERT NS-574
FS	01	66	01	5957	ANT-A SOCIAL INSECT
KIT	30	71	1	372412	APPLE IS RED-EARLY CHD SERIES
FS	15	71	01	953	ARAB WORLD & ISLAM-OHFP900
R	12	71	01	3982	ARABIAN NIGHTS
FSR	15	70	01	ARO	ARCIZZONE-TIM & SEA CAPTAIN-11
FSR	15	70	01	353979	ARIZONA STATE CAPITAL TOUR
VM	12	71	01	2737	ARMIES CLASH, 1862-1863
FS	01	70	01	6451	ARMSTRONG FACT FILE ON FLOORS
FS	15	71	01	91009	AROUND WORLD WITH MAGELLAN
AP	30	71	04	700	ART PTF-COL MOVEM PERCEP SPACE
TRA	12	71	01	915	ASIA MAP OUTLINES - SET
VM	12	71	01	784	ASSEMBLY SINGING-M780
FSR	15	71	01	30142	AT HOME - YNW300
FS	15	72	1	300	AT HOME IN CITY AND FARM-LOME
FSR	15	71	01	370	AT SCHOOL - YNW300
FS	15	72	1	300	AT WORK IN THE CITY-LOME
FS	15	72	1	300	AT WORK ON THE FARM-LOME
V.	12	71	01	909	ATLAS OF WORLD HISTORY-PTIV
VM	12	72	1	9125	ATLAS-CENTRAL & SO AFRICA
VM	12	72	1	912	ATLAS-FAR EAST & NO AFRICA
VM	12	72	1	912	ATLAS-LATIN AMER NO-SO POLAR R
FS	1	71	01	5412	ATOMS AND MOLECULES
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2
FL	P	71	1	5412	ATOMS TO MOLECULES #1
FS	01	64	01	551525	AUTUMN-FOUR SEASONS
FSC	15	71	01	AVE	AVERILL-JENNY BIRTHDAY BOOK-SC
C	15	72		921R	BABE RUTH-CHAMPIONS ALL
R	12	71	01	785	BACH, CPE, HARPSICHORD & OBOE
FS	01	63	01	5899	BACTERIA
C	4	71	01	9218	BALBOA
FS	15	71	01	91009	BALBOA DISCOVERS THE PACIFIC
C	4	71	01	9218	BANNEKER, BENJAMIN
VM	12	71	01	781	BASIC RHYTM PATT - PT1 - M780
VM	12	71	01	781	BASIC RHYTM PATT - PT2 -M780
R	12	65	01	3719	BASIC SONG EXCPTNL CHILDRN-SET
FS	01	66	01	511	BASIC SUBSETS & EMPTY SET
FS	01	58	01	6415	BATTER BREADS
FS	1	70	2	BAU	BAUM-ROAD TO LAND OF OZ
FL	8	72	1	582	BEAN SPROUTS
FS	1	70	2	6415	BEAUTIFUL CAKES

LEVEL	LOTH	PRO/ PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
IJ		EBEC	C		DISTRICT	AMPHIBIANS
JS		MILLER			DISTRICT	MARKET RESEA
I	05	EBF	C		DISTRICT	HIST ANCIENT
PIJ		EAI		12	EDSA-II	PHYSICAL ED
IJ	89	EBEC	C	12	NDEA-III	USPRESIDENTS
PI		TROLL	C	7	EDSA-II	ARITHMETIC
P	30	PSFOM	C		DISTRICT	ANIMALHABBEH
PIJ	42	PSFOM	C		DISTRICT	ANIMALS
P	30	PSFOM	C		DISTRICT	MOLLUSKS
PIJ	74	DISNEY	C	13	EDSA-II	DESERT
IJ	42	PSFOM	C		DISTRICT	INSECTS
P	3	BOMAR	C		EDSA-II	
IJ		TROLL	C	6	NDEA-III	ISLAM
PIJ		MILBRO		6	NDEA-III	FOLKLOREARAB
PI		WESTON	C		DISTRICT	TITLE
J		ASTATE	C		DISTRICT	ARIZ COVER
PJS		MMM	B	7	NDEA-III	CIVIL WAR
JS		ARMSTG	C		DISTRICT	FLOOR COVER
PI		TROLL	C	6	NDEA-III	MAGELLEN
C		VANR	C	108	EDSA-II	ART
C	20	MIK	C	7	NDEA-III	ASIA GEOGRAP
C		MMM	B		EDSA-II	MUSIC VOCAL
P		KIMBO	C	8	NDEA-III	FAMILY LIFE
P		EBEC	C		NDEA-III	SOC SCIENCES
P		KIMBO	C	8	NDEA-III	SCHOOL
P		EBEC	C		NDEA-III	SOC SCIENCES
P		EBEC	C		NDEA-III	SOC SCIENCES
PJS		MMM	B	3	NDEA-III	HIST WORLD
IJ	23	MMM	B	2	EDSA-II	AFRICA
IJ	23	MMM	B	2	EDSA-II	FAREASTAFRIC
IJ	23	MMM	B	2	EDSA-II	LAMERNOSOPOL
IJ	46	SVE	C	5	EDSA-II	CHEMISTRY
J		MCG			EDSA-II	CHEMISTRY
J		MCG	C		DISTRICT	CHEMISTRY
P	33	FSH	C		DISTRICT	SEASONS
PI		WESTON	C	8	EDSA-II	TITLE
PI		TROLL			EDSA-II	SPORTBIOGRAP
G		RCA		2	EDSA-II	MUSIC INSTRU
I	52	EBF	C		DISTRICT	BACTERIOLOGY
PI		TROLL		5	NDEA-III	EXPLORERS
PI		ERS	C	6	NDEA-III	EXPLORERS
IJ		TROLL		5	NDEA-III	NEGROES BIO
C		MMM	B		EDSA-II	MUS RHYTHM
G		MMM	B		EDSA-II	MUS RHYTHM
P	3	CNCPTR			DISTRICT	SONGS
P	35	GINN	B		DISTRICT	ARITHMETIC
JS	74	GMILLS	C		DISTRICT	FOOD PREPARA
P		PSFOM	C		DISTRICT	TITLE
PI		MCG	C	15	EDSA-II	SEEDS
JS		GMILLS	C		DISTRICT	FOOD PREPARA

PRINT-OUT BY DEWEY DECIMAL CLASSIFICATION NUMBER (NUMERICAL ORDER)

LOCATION: 20-PUEBLO DATE: 3/23/73 AUDIO-VISU

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE
FS	15	71	01	529	OUR TIME CALENDAR-NSW 550
FSS	12	71	01	529	WHAT DAY IS IT-ES500
FSS	12	71	01	529	WHEN NIGHT COMES-ES500
R	12	71	01	530	SIGHTS AND SOUNDS
FS	1	71	01	530	EXPERIMENTS WITH LENGTH
FSS	12	71	01	530	POWER MOVES THINGS - ES500
FS	.01	58	01	5308	BIG,SMALL,SHORT AND TALL
FS	01	70	01	5308	BIG-LITTLE THINGS-SIZE CONCEPT
FS	1	71	01	531	EXPERIMENTS WITH MASS
FS	1	71	01	532	EXPERIMENTS W VOLUME & DENSITY
FL	8	71	01	533	MOUSE & CANDLE
FS	01	65	01	53362	MOTION AND FORCE
FS	01	65	01	53362	PHYSICAL REACTIONS
FS	1	63	01	534	SOUNDS THAT WE HEAR
FS	01	66	01	535	BENDING LIGHT
FL	8	71	01	535	LIGHT & COLOR-SPECTRUM
FL	8	71	01	535	LIGHT-ECLIPSES
FS	01	59	01	535	HOW LIGHT TRAVELS
FS	01	64	01	53721	STATIC ELECTRICITY
FS	01	58	01	53721	STATIC ELECTRICITY
FS	01	64	01	541	SIMPLE CHEMICAL REACTIONS
FL	8	71	01	541	CHEMICAL & PHYSICAL CHANGE
FL	8	71	1	5412	ATOMS TO MOLECULES #1
FS	1	71	01	5412	ATOMS AND MOLECULES
FL	8	71	01	5412	ATOMS TO MOLECULES - PART 2
FS	1	71	01	54139	CHEMICAL CHANGES
FS	1	71	01	546	WHAT THINGS ARE MADE OF
FS	01	64	01	5485	HOW CRYSTALS ARE FORMED
FL	8	71	01	549	LET'S LOOK AT ROCKS
PIC	18	71	01	549	IMPORTANT MINERALS
FSC	15	71	1	550	LIFE STORY-SET
FS	15	71	01	550	MEASUR OUR WORLD-SET
FSR	15	71	01	550	OUR PLANET EARTH-SET
FSS	12	71	01	550	OUR PLANET EARTH-ES500
TRA	12	72	1	551	STRUCTURE OF THE EARTH
FS	15	71	01	551	WHAT UNDER CITY STREET
FS	15	71	01	551	WHAT UNDER FARMER GARDEN
FS	15	71	01	551	WHAT UNDER OCEAN
FS	15	71	01	551	WORLD BELOW US-SET
FS	15	71	01	551	WHAT UNDER EARTH
FS	01	65	01	551	HOW THINGS CHANGE
FSR	15	71	01	5511	HOW EARTH WAS FORMED-OPE550
FS	01	66	01	5512	VOLCANOES AND EARTHQUAKES
FL	8	71	01	5513	STORY THE EARTH TELLS
FL	8	71	01	5513	STRANGE ROCK & LAND FORMAT
FSC	15	71	01	5513	WATER IN THE DESERT NS-574
FS	15	72	1	5514	CHANGING FACE OF EARTH-MEH
FS	15	72	1	5514	CLIMATES OF THE EARTH-MEH
FS	15	72	1	5514	LIVING IN DIFFERENT PLACES-MF
FS	15	72	1	5514	MANS EARTH HOME-SET

AL ORDER)

AUDIO-VISU

L SOFTWARE (MEDIA) INVENTORY PROGRAM NO: MED13A PAGE: 15

	LEVEL	LGTH	PRO/ PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
R-NOW SSD							
SSDD	P		TROLL	C	6	NDEA-III	CALENDARS
-ESSDD	P	14	EBEC	C		EDSA-II	TIME
S	P	14	EBEC	C		EDSA-II	TIME
LENGTH	P		BOMAR		6	EDSA-II	PHYSICS
GS - ESSDD	JS	41	SVE	C	7	EDSA-II	PHYSICS
AND TALL	P	14	EBEC	C		EDSA-II	PHYSICS
S-SIZE CONCEPT	P	30	PSFOM	C		DISTRICT	PHYSICS
MASS	PI		SCHLES			DISTRICT	PHYSICS
LUME & DENSITY	JS	34	SVE	C	7	EDSA-II	PHYSICS
	JS	49	SVE	C	7	EDSA-II	PHYSICS
	PI	4	MCG	C	15	NDEA-III	PHYSICS
ONS	IJ	42	PSFOM	C		DISTRICT	PHYSICS
EAR	IJ	42	PSFOM	C		DISTRICT	AERODYNAMICS
	P	30	PSFOM	C		DISTRICT	SOUNDS
ECTRUM	IJ	42	PSFOM	C		DISTRICT	LIGHT
	JHC	1	DDD	C	23	NDEA-III	LIGHT
LS	IJ	3	UNIV	C	14	NDEA-III	LIGHT
ITY	IJ	39	PSFOM	C		DISTRICT	LIGHT
ITY	IJ	42	PSFOM	C		DISTRICT	ELECTRICITY
REACTIONS	IJ	65	SVE	C		DISTRICT	ELECTRICITY
ICAL CHANGE	IJ	42	PSFOM	C		DISTRICT	CHEMISTRY
LES #1	IJ	4	UNIV	C	20	NDEA-III	CHEMISTRY
ULES	J		MCG	C		DISTRICT	CHEMISTRY
LES - PART 2	IJ	46	SVE	C	5	EDSA-II	CHEMISTRY
S	J		MCG			EDSA-II	CHEMISTRY
MADE OF	IJ	42	SVE	C	5	EDSA-II	CHEMISTRY
FORMED	IJ	43	SVE	C	5	EDSA-II	CHEMISTRY
CKS	IJ	42	PSFOM	C		DISTRICT	CHEMISTRY
ALS	PI	4	TROLL	C	25	NDEA-III	ROCKS
	PI	8	SVE	C	8	EDSA-II	MINERALS
D-SET	PI	2	EEM	C	7	EDSA-II	EARTH
H-SET	PI		TROLL	C		NDEA-III	MAPS
H-ESSDD	IJ	6	FSH	C		NDEA-III	EARTH
EARTH	P	14	EBEC	C		EDSA-II	EARTH
STREET	IJ	4	HAMMON	C	8	NDEA-III	GEOLOGY
R GARDEN	PI		ERS	C	6	EDSA-II	EARTH
N	PI		ERS	C	6	EDSA-II	EARTH
SET	PI		ERS	C	6	EDSA-II	EARTH
H	PI		ERS	C		EDSA-II	EARTH
GE	PI		ERS	C	6	EDSA-II	EARTH
RMED-OPESED	P	45	PSFOM	C		DISTRICT	PHYSICS
ARTHQUAKES	IJ		FSH	C	8	NDEA-III	GEOLOGY
TELLS	IJ	43	PSFOM	C		DISTRICT	GEOLOGY
LAND FORMAT	PI	4	TROLL	C	25	NDEA-III	GEOLOGY
SERT NS-574	PIJ	4	TROLL	C	22	NDEA-III	GEOLOGY
F EARTH-MEH	PIJ	47	DISNEY	C	13	EDSA-II	DESERT
EARTH-MEH	P		EBE	C		NDEA-III	GEOGRAPHY
RENT PLACES-MEH	P		EBE	C		NDEA-III	GEOGRAPHY
-SET	P		EBE	C		NDEA-III	GEOGRAPHY
	P	8	EBE	C	58	NDEA-III	GEOGRAPHY

PRINT-OUT BY SUBJECT HEADING (ALPHABETICAL ORDER)

LOCATION: 2C-PUEBLO DATE: 5/01/73 AUDIO-VIS

MEDIA CODE	STOR CODE	YEAR	PRINT COPY	CALL #	TITLE	LEV
KIT	30	71	02	3724	YOUNG ADVENTURE SERIES	I PI
FSR	15	70	01	WIE	WIESE-FISH IN THE AIR-18	IJ
FS	01	65	01	53362	PHYSICAL REACTIONS	IJ
VM	12	72	1	9126	ATLAS-CENTRAL & SO AFRICA	G
TRA	12	71	01	916	AFRICA MAP OUTLINES-SET	JS
SL	12	71	01	916	AFRICAN DRESS AND DESIGN	G
SL	4	71	01	9167	UGANDA CHILDR-CML910	IJ
SL	12	71	01	916	DISCOVERING ART OF AFRICA	G
SL	4	71	02	91667	GHANA CHILDR-CML910	IJ
SL	12	71	01	916	TREASURES TRADITION AFRICA ART	IJS
FSC	15	72	1	616861	ALCOHOL AND CHILDREN	IJ
C	4	72	1	ALC	LITTLE WOMEN	PI
FS	1	71	01	4211	MAKE ALPHABETIZ WORK F YOU	IJ
FS	01	70	01	918	LAND & PEOPLE-NORTH/SOUTH AMER	IJ
FS	1	70	1	5978	CROCODILIANS AND LIZARDS	IJ
FS	1	70	1	5978	AMPHIBIANS	IJ
FS	1	72	1	5978	DISCOVERING AMPHIBIANS	IJ
FS	01	60	01	61284	EYE AT WORK	PIJ
TRA	12	71	01	612	HUMAN BODY - SET	IJ
FS	01	65	01	59147	SKELETONS	PI
R	12	70	01	AND	BEST LVD FAIRY TALES ANDERSEN	PI
R	12	71	01	AND	TALES OF HANS CH ANDERSEN	P
FS	01	54	01	5915	ANIMAL HOMES	IJ
FS	01	63	01	599323	RABBITS AND RHODENTS	IJ
FS	01	64	01	593	ONE-CELLED ANIMALS	PIJ
FS	01	61	01	590	ANIMAL KINGDOM	P
FSS	12	71	01	590	MEET THE ANIMAL FAMILY-ESSCO	IJ
FS	01	64	01	592	SEA STAR AND RELATED ANIMALS	PI
PIC	18	71	01	590	WILD ANIMALS	PI
PIC	18	71	01	636	FARM AND RANCH ANIMALS	PIJ
FL	8	71	01	591	HOW ANIMALS COMMUNICATE	
FS	01	64	2	57457	NATURES DISGUISES	IJ
FS	01	64	02	57457	NATURES APOSTMOPHE, DISGUISES	I
C	4	71	01	568	PREHISTORIC ANIMALS	IJ
FS	01	67	01	59544	SPIDERS	IJS
FSR	15	71	1	572	AFRICA:BEGIN OF JOURNEY	IJ
FSR	15	71	01	572	EARTH'S PEOPLES-OPE550	IJS
FSR	15	71	1	572	FIRST ASIANS	IJS
FSR	15	71	1	572	ISLEWORLD:PEOPLE OF POLYNESIA	IJS
FSR	15	71	1	572	MAN ON THE MOVE-SET	P
FSS	12	71	01	570	MEET THE HUMAN FAMILY-ESSCO	IJS
FRS	15	71	1	572	MIDEAST:WAY STA MANSLONG JOUR	IJS
FSR	15	71	1	572	STORY OF STONE-AGE MAN-EUROPE	P
FS	01	56	01	57492	HOW TO MAKE AN AQUARIUM	IJ
FS	01	62	01	57492	LIFE IN AN AQUARIUM	
KIT	15	72	1	9153	YOU DISCOVER SAUDI ARABIA	IJ
FS	1	72	1	9153	YOU DISCOVER SAUDI ARABIA	IJ
C	15	71	01	953	LIFE TIME ARAB WORLD HOLATRIC	I
FSR	15	70	01	930	ADVENTUR OUR PAST-AND TIME-930	PI
FSR	15	70	01	ARD	TIM & SEA CAPTAIN-11	

	LEVEL	LGTH	PRO/PUBL	PHYS SPEC	COST	FUNDS	SUBJECT
	I		BOWAR		16	EDSA-II	
SERIES	PI		WESTON	C		DISTRICT	
E AIR-18	IJ	42	PSFOM	C		DISTRICT	AERODYNAMICS
NS	IJ	23	MMX	C	2	EDSA-II	AFRICA
SO AFRICA	C	20	MIK	C	7	NDEA-III	AFRICA
ES-SET	JCI	20	SVE	C	8	EDSA-II	AFRICA
D DESIGN	G		UNIV	C		NDEA-III	AFRICA
L910	IJS	20	SVE	C	8	EDSA-II	AFRICA ART
OF AFRICA	C		UNIV	C		NDEA-III	AFRICAGHANA
910	IJS	20	SVE	C	8	EDSA-II	AFRICIA
ION AFRICA ART	IJS		EDA	C	13	EDSA-II	ALCOHOL
DREN	IJ		MILBRO		8	EDSA-II	ALCOTI
	PI	29	SVE	C	5	NDEA-III	ALPHABET
WORK F YOU	IJ		SVE			DISTRICT	AMERICASCFOS
RTH/SOUTH AMER	IJ		FBEC	C		DISTRICT	AMPHIBIA
LIZARDS	IJ		EBEC	C		DISTRICT	AMPHIBIANS
	IJ		EBEC	C		DISTRICT	AMPHIBIANS
IBIANS	IJ	41	PSFOM	C		DISTRICT	ANATOMY
	PIJ	12	MIK	C	7	EDSA-II	ANATOMY
	IJ	42	PSFOM	C		DISTRICT	ANATOMY
	PI		ROBIN			DISTRICT	ANDERSEN
LES ANDERSEN	PI		ALESCO		6	NDEA-III	ANDERSENFAIR
ANDERSEN	P	30	PSFOM	C		DISTRICT	ANIMALHABBEH
	IJ	52	EBEC	C		DISTRICT	ANIMALHABBEH
INTS	IJ	50	EBF	C		DISTRICT	ANIMALONECEL
LS	PIJ	42	PSFOM	C		DISTRICT	ANIMALS
	P	14	EBEC	C		EDSA-II	ANIMALS
FAMILY-ES50C	IJ	50	EBF	C		DISTRICT	ANIMALS
TED ANIMALS	PI	8	SVE	C	8	EDSA-II	ANIMALS
	PI	8	SVE	C	8	EDSA-II	ANIMALS-FARM
NIMALS	PIJ	4	TROLL	C	25	NDEA-III	ANIMALSHABBE
UNICATE						DISTRICT	ANIMALSHABBE
S	IJ	42	PSFOM	C		DISTRICT	ANIMALSHABBE
HE, DISGUISES	I		TROLL		5	EDSA-II	ANIMALSPREHT
ALS	IJ	45	PSFOM	C		DISTRICT	ANIMALSSPIDE
	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
JOURNEY	IJ		FSH	C	8	NDEA-III	ANTHROPOLOGY
OPESSO	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
OF POLYNESIA	IJS	12	MILBRO	C	90	NDEA-III	ANTHROPOLOGY
ET	P	14	EBEC	C		EDSA-II	ANTHROPOLOGY
MILY-ES50D	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
ANSLONG JOUR	IJS		MILBRO	C		NDEA-III	ANTHROPOLOGY
E MAN-EUROPE	P	30	PSFOM	C		DISTRICT	AQUARIUM
UARIUM	IJ	40	PSFOM	C		DISTRICT	AQUARIUM
UM		7	DISCOV	C		DISTRICT	ARAB COUNTRIES
I ARABIA	IJ		DISCOV	C		DISTRICT	ARAB COUNTRIES
I ARABIA	IJ		TROLL		5	NDEA-III	ARABCOUNTHIS
RLD RELATION	I		EBEC	C		DISTRICT	ARCHEOLOGY
-AND TIME-930	PI		WESTON	C		DISTRICT	ARDIZZONE
-11							

"KEEPING ORDER"

PART IV

CODING MICROFICHE - A CATALOGUE

M I C R O F I C H E

C A T A L O G U E

ESEA Title III Staff Utilization
for Continuous Progress Education Project

February, 1973

UN 000 187	Color Mixing	M & U	Art
UN 000 740	The Elements of Art: Line	M	Art
UN 000 839	The Element of Line in Art	Elem.	
UN 002 009	The Technique of Drawing a Tree	M-U	Art
UN 002 010	Techniques of Drawing a Human Figure	M-U	Art
UN 002 087	Making A Hand Puppet with a Paper Mache Head	M	Art
UN 002 303	Texture	M	Art
UN 002 326	How & Why Artists Changed Their Style of Art During the First Half of the 20th Century	Elem.	
UN 002 518	Understanding & Use of Basic Perspective	M-U	Art/Drawing
UN 002 701	The Properties of Natural Found & Commercial Clay	Elem.	Pottery
UN 002 763	Casting Metal in Sand Molds	Elem.	
UN 002 773	Constructing a Coil Ceramic Pot	U	Art
UN 002 845	The Complementary Colors	P-U	Art
UN 002 948	Perspective, Please!	M	Art
UN 002 960	Using Space in Design	M-U	Art
UN 003 137	Decorating Clay Tiles	P	Art
UN 003 190	Identifying Primary & Secondary Colors	Elem.	

UN 003 230	Making Things Out of Ceramic Clay	P	Art
UN 003 361	Value is the Degree of Lightness or Darkness of a Color	Elem.	Art
UN 003 384	A Picture & Sound Can Give You A Fun Way to Express Feelings	P-M	Humanities/ Art
UN 003 393	Color Value	M	Art

UN 000 317	Identification of Hand Signals When Riding A Bicycle	Elem.
UN 000 318	Identify the Safety Features of a Bicycle	Elem.
UN 002 306	Bicycle Safety	P-M
UN 003 188	There Are Inland Sailing Rules of the Road	Elem.

UN 000 835	Making Introductions or Meeting New Friends	Elem.	
UN 000 842	Mysteries of Migration	Elem.	
UN 000 852	How To Be Popular	Elem.	
UN 000 876	Understanding Others	Elem.	
UN 000 881	Becoming More Aware of Everyday Surroundings,	Elem.	
UN 000 884	Sharing	Elem.	
UN 000 889	Will Teen-Age Marriage Work?		Guidance
UN 001 834	Understanding Your Parents & Friends		
UN 001 847	Curriculum Enrichment for the Gifted Child		
UN 002 307	Coping with & Developing A Positive Self-Image	U	
UN 002 311	Helping An Injured Person	Elem.	Health
UN 002 417	Traffic Signs Are Life-Saving Tips	U	Driver Ed.
UN 002 624	Propaganda	M	
UN 002 654	Study To Enable Teachers To Construct Valid, Useful Multiple-Choice Tests		
UN 002 832	We Have Attitudes About Our Abilities That Are Positive & Negative	U	Guidance
UN 003 108	Orienting Parents About A New School Prior To Its Opening		School Principal
UN 003 150	There Are Many Reasons For Being Honest	U	Guidance
UN 003 310	Self-Respect Can Be Achieved	E-U	Soc. Science
UN 004 032	Substitute Teachers Should Be Familiar With The School	Adult	Sub. Teachers

UN 000 412	Mealtime Manners	Elem.	Home Ec.
UN 000 413	How To Set The Table	Elem.	Home Ec.
UN 000 737	Getting Ready To Cook	Elem.	Home Ec.
UN 000 760	Living & Working Together	Elem.	Home Ec.
UN 000 808	Learning To Cook	Elem.	Home Ec.
UN 000 818	Identification of the Upper Parts of the Electric Sewing Machine	Elem.	Home Ec.
UN 001 619	Color In My Room	Elem.	Home Ec.
UN 002 026	Dating Etiquette	U	Home Ec.
UN 002 585	So What Is A Sitter To Do?	U	Home Ec.
UN 002 632	There Are Various Ways To Clean A Sweater	U	Home Ec.
UN 002 661	Obtaining Knowledge: Gaining Insight & Developing Skill in Relationship With Children	Elem.	Home Ec.
UN 002 670	Maturity Comes About In Many Ways	Elem.	Home Ec.
UN 002 690	There Are Various Ways To Find Our Basic Figure Problem	Elem.	Home Ec.
UN 002 718	Pre-School Child's Concept of Self-Others & The World	Elem.	Home Ec.
UN 002 719	How To Make Biscuits	Elem.	Home Ec.
UN 002 764	Yeast Breads	Elem.	Home Ec.

UN 002 821	Operating A Sewing Machine	M	Home Ec.
UN 002 975	Threading the Upper Section of a Sewing Machine	M-U	Home Ec.
UN 003 003	To Plan, Prepare & Serve Quick Easy Meals Requires A Specific Technique	U	Home Ec.
UN 003 034	Basic Four Food Plan	M-U	Home Ec.
UN 003 058	Values Determine Goals	Elem.	Home Ec.
UN 003 138	Spending Money Wisely	Elem.	Home Ec.
UN 003 235	Preparing A Family Dinner	M-U	Home Ec.
UN 003 350	Setting A Table	Elem.	Home Ec.
UN 004 010	Substitute Can Be Used for Basic Ingredients in Recipes	M-U	Home Ec.
UN 004 015	It's Recipe Time	M-U	Home Ec.
UN 004 025	Bleach, A Laundry Aid	Elem.	Home Ec.
UN 004 026	The One & Two Year Old	M	Child Care

UN 000 547	How To Draw A Circle	Elem.	Mech. Drawing
UN 000 726	Lettering in Drafting	Elem.	
UN 000 797	Six Basic Operations of the Jointer	Elem.	Woodworking
UN 000 854	Reading Linear Scales	Elem.	Elec. Shop
UN 001 607	Woodworking Tools Have Names	M	Wood Shop
UN 001 661	Soft Soldering	M	Metal Shop
UN 001 662	Sharpening a Single-Beveled Edge Woodworking Tool	Adult & M-U	Woodworking
UN 001 663	The Jack Plane: Assembly & Adjustment	M-U	Woodworking
UN 002 120	The Proper Way To Square A Board	M-U	Indus. Ed.
UN 002 392	Basic Drafting Instruments, Materials & Their Uses	Elem.	Mech. Drawing
UN 002 399	Basic Steps In House Building	P-M	Soc. Studies
UN 002 467	Drawing Parallel Lines With A T-Square & A Triangle	M-U	Mech. Drawing
UN 002 581	Ruler Measurement: A Study of Measurement Division	M-U	Science/Ind. Arts & P. E.
UN 002 634	Computing Lumber Costs	M-U	Ind. Arts
UN 002 767	Electrons & Light	Elem.	
UN 002 924	Lighting the Gas Welding Torch	M	Ind. Arts
UN 002 812	Metal Casting	U	Ind. Arts

UN 002 972	There Are Steps To Theven-izing A Circuit Network	M-Adult	Electronics
UN 002 974	An Inch	M-U	Ind. Education
UN 003 014	There Are Procedures For Changing A Band-Saw Blade	M	Ind. Arts
UN 003 168	Sketching Is A Form Of Drawing	Elem.	
UN 003 360	Ohm's Law	M-U	Electronics
UN 004 034	A New King of Jigsaw Puzzle	Elem.	Ind. Arts

UN 000 168	How Does the Treatment of Plot, Setting, Characters & Theme Make the Short Story Different from Other Forms of Fiction?	Elem.	
UN 000 309	Identifying the Six Components of a Newspaper Article	Elem.	
UN 000 310	Writing a Newspaper Article Using the Six Basic Components	Elem.	
UN 000 499	The Basic Components of a Biography	U	
UN 000 516	The Conflict Between Individual Belief & Social Custom, As Seen Through Mark Twain & Huckleberry Finn	Elem.	
UN 000 554	How To Get More Out Of Your Newspaper	Elem.	
UN 000 616	Connotation of Words	U	
UN 000 749	The Letters of the Alphabet	Elem.	Lang. Arts
UN 000 792	The Ballad	Elem.	
UN 000 812	Writing Direct & Indirect Quotations	Elem.	
UN 000 826	Haiku Poetry	Elem.	
UN 000 894	Listening is a Basic Skill for Gaining Information	U	
UN 000 897	The Short Story	Elem.	
UN 001 957	Pantomime	M	Speech
UN 001 965	Improving Observation Abilities	M	Lang. Arts

UN 002 036	How Businesses Are Organized	M-U	Bus. Ed.
UN 002 385	Do You Mean What You Say?	U	Lang. Arts
UN 002 403	Constructing An Informative Speech Outline	M-U	Speech
UN 002 458	Our World Is Full of Color	P	Reading Readiness
UN 002 479	Preparing For Poetry	M	Poetry
UN 002 529	Different Types of Conflict in the Short Story	U	Lang. Arts
UN 002 621	Simplified Outlining	M-U College	Lang. Arts/Read. Soc. Studies
UN 002 693	There Are Techniques in Writing a Creative Story	P	
UN 002 717	Understanding Word Roots	Elem.	
UN 002 720	Creative Writing	P	
UN 002 739	Summarizing Information in Outline Form	M	Lang. Arts
UN 002 883	To Read & Construct A Book That Contains A Cover, Title Page, Table of Contents & Three Or More Stories	Elem.	Lang. Arts
UN 002 886	Preparation of a Bibliography	Elem.	Lang. Arts
UN 002 909	Haiku Poetry	Elem.	
UN 002 945	Improving Listening Skills	M	Eng./Speech
UN 003 036	Inadequate Self Image	M-U	Lang. Arts/ Sociology
UN 003 036	A "Bibliotherapeutical" Approach Can Change Attitudes	U	Lang. Arts

UN 003 046	Rhyme Time	Elem.	
UN 003 091	Feeling From Poetry	P.	Lang. Arts
UN 003 098	Colors Can Affect How You Feel	M	Lang. Arts
UN 003 126	Using An Index	M	Lang. Arts/ Soc. Studies
UN 003 136	Making Interesting Book Reports	M	English
UN 003 141	How To Use A Thesaurus	P-U	Lang. Arts
UN 003 173	Punctuating Quotations	Elem.	
UN 003 180	Events Occur In A Certain Order & In Relationship To Each Other	Elem.	Lang. Arts
UN 003 183	Cinquain Is A Distinctive Kind of Poetry	Elem.	
UN 003 210	Preparing A Short Written Report	M-U	Lang. Arts/ Soc. Studies
UN 003 364	Cinquain Poetry	Elem.	
UN 003 378	Teachers Can Be Motivated To Accept Changes in Instructional Programs	Adult	School Admin.
UN 004 002	Days of the Week & Their Abbreviations Should Be Written with Capital Letters	P	Lang. Arts
UN 004 024	The Ten Basic Sentence Patterns	Elem.	

UN 000 197	The Wise Use of Credit	Elem.	
UN 000 255	Establishing Classroom Rules with Students at the Start of School	Elem.	
UN 000 373	Threading the 16-MM. Bell & Howell Motion Picture Projector	Elem.	
UN 000 482	Be Your Own Dictionary	Elem.	
UN 000 569	Finding Library Books	Elem.	Lib. Science
UN 000 584	Reasoning: Ability to Predict a Logical Outcome	Elem.	
UN 000 679	The Card Catalog	Elem.	Lib. Science
UN 000 688	Career Development	Elem.	
UN 000 713	Dictionary Use	U	
UN 000 722	Learning Activity Package	Elem.	
UN 000 791	Playing the T-3000 Revere-Wollensak Tape Recorder	Elem.	
UN 002 020	The Readers Guide Is The Best Index For Selecting Current Information In Magazines	U	English Soc. Studies Speech Science
UN 002 344	Using Your Learning Center	M	
UN 002 356	Identifying Author Cards & Title Cards In A Card Catalog	M	Lang. Arts
UN 002 344	The Encyclopedia Is A Primary Source For Reference Material	P	Lib. Science
UN 002 460	Locating a "Needle In A Haystack" of Magazines	M	Lib. Research/ Reference Skills
UN 002 477	Getting The Most From A Dictionary	M	Lib. Science

UN 002 498	The Dewey Decimal System	M	Lib. Science
UN 002 574	There's Fun in the Dictionary	P	
UN 002 786	Fiction Books	Elem.	Lib. Science
002 927	Introduction to the Library	Elem.	
UN 002 956	Locating A Word In The Dictionary	M	Humanities
UN 002 963	The Card Catalog Cards	M	Lib. Science
UN 003 029	Operating A 16-MM. Bell & Howell Movie Projector Effectively	M	Audio-Visual Education
UN 003 076	Using the Readers Guide to Periodical Literature	M-U	English/Soc.St. Lib. Science
UN 003 257	There Are Three Major Types of Media	E-U	Instruc. Mater. Centers Aids

UN 000 163	The Use of the Protractor	Elem.
UN 000 254	Associative Property of Addition of Whole Numbers	Elem.
UN 000 275	Division of Numbers in Exponential Form	Elem.
UN 000 276	The Use of Prime Numbers in the Addition of Fractions	Elem.
UN 000 286	Multiplication as Repeated Addition	Elem.
UN 000 287	Commutative Property of Addition of Whole Numbers	Elem.
UN 000 292	Adding Polynomials	Elem.
UN 000 293	Subtracting Polynomials	Elem.
UN 000 294	Polynomial Identification & Classification by Degree	Elem.
UN 000 295	Multiplication of Monomials	Elem.
UN 000 297	Grouping in Bases Five, Seven & Ten	Elem.
UN 000 300	The Distributive Property of Multiplication	Elem.
UN 000 319	Commutative Property of Multiplication	Elem.
UN 000 320- UN 000 332	Zero As A Factor	Elem.
UN 000 434	Constructing & Measuring Triangles	Elem.
UN 000 442	Solving Word Problems In Addition & Subtraction	Elem.
UN 000 449	Multiplication by Two-Figure Number	Elem.

UN 000 453	Place Value	Elem.	
UN 000 454	Commutative Property of Multiplication of Whole Numbers	Elem.	
UN 000 461	Joining Sets to the Concept of Addition	Elem.	
UN 000 479	Subtraction	Elem.	
UN 000 523	Identification of Circles	Elem.	
UN 000 551	Ordinal Numbers	Elem.	
UN 000 615	Algebra Generalizations	Elem.	
UN 000 687	Systems of Numeration	M	Math.
UN 000 703	Cancellation, A Short Cut in Multiplication of Fractions	Elem.	Math.
UN 000 706	Adding & Naming Numbers in Decimal Form	M	Math.
UN 000 716	Factors, Co-Efficients, & Exponents	U	Math.
UN 000 721	Algebraic Sentences & Assigning Numerical Values to Variables	U	Algebra I
UN 000 722	Learning Activity Package	U	Algebra I
UN 000 735	Exploring Some Number Mysteries	Elem.	
UN 000 753	Two-Step Problem Solving in Math	M	Math.
UN 000 754	Recognizing the Circle	Elem.	Science/Math.
UN 000 764	Number Bases Other Than Ten	Elem.	Math.
UN 000 771	How To Multiply Rational Numbers When They Are Written As Fractions	U	Math.

UN 000 793	What Is A Fraction?	M	
UN 000 796	Addition Principle of Solving Equations	Elem.	
UN 000 798	Reading Word Problems	Elem.	
UN 000 802	Adding Sums Greater Than Ten	Elem.	
UN 000 807	The Addition & Multiplication Properties of Inequalities	Elem.	
UN 000 836	Division of Whole Numbers by a Two-Place Divisor	Elem.	
UN 000 838	Numerals 1 through 9	Elem.	
UN 000 845	The Formula I = PRT Will Solve Interest Problems		Algebra I
UN 000 850	Selected Use & Function of the Roman Numeration System	Elem.	
UN 000 851	Figuring Board Feet	Elem.	Math.
UN 000 861	High-Speed Multiplication, the Trachtenberg System (Multiplying by Six)	Elem.	
UN 000 862	High-Speed Multiplication (Multiplying by Seven)	Elem.	
UN 000 869	The Multiplication Table	U	
UN 000 870	Addition-Union of Two Sets, One of Which is Greater Than Ten	Elem.	
UN 001 651	Search For Mathematical Patterns Help Children Think for Themselves	M	Math.
UN 001 729	Equivalent Fractions	U	Math.

UN 001 738	Maximum & Minimum in Area & Perimeters	M	Math.
UN 001 927	Measuring Liquids	P	Math.
UN 001 988	Computing Per Cent As A Decimal Fraction Or A Common Fraction	U	Math.
UN 002 276	Solving Simple Algebraic Equations	U	Math.
UN 002 343	Long Division by Two-Place Divisors	M	Math.
UN 002 345	The Meaning of Area of a Rectangle & Its Usage	M	Math.
UN 002 351	Borrowing In Subtraction	M	Math.
UN 002 355	Dividing by Using One Digit Divisors	P	Math.
UN 002 368	The Isosceles Triangle Theorem	Elem.	
UN 002 374	Proportions & Extended Proportions	Elem.	
UN 002 381	Descartes' Rule For Determining Roots		Algebra
UN 002 383	Exacting Square Root	M & U	Math.
UN 002 384	Rename Is The Name of the Game	P & M	Math.
UN 002 393	Four Basic Axioms For Solving Linear Equations	M	Algebra
UN 002 407	To Regroup or Straight Subtract	P	Math.
UN 002 411	See By Doing the Difference in Size of Fractions	M	Math.
UN 002 418	Ordinal Numbers Indicate the Order of a Certain Person or Thin in a Row or Line	P	Math.

UN 002 448	The Addition of Three Numerals	P	Math.
UN 002 508	Metric Units in Linear Measurement	P	Science/Math.
UN 002 513	Addition & Subtraction in the Set of Rational Numbers	M & U	Math.
UN 002 525	Method for Subtracting Signed Numbers	U	Math.
UN 002 526	The Intersection & Union of Sets	U	Math.
UN 002 534	The Multiplication of Whole Numbers by Zero	P	Math.
UN 002 535	Checking Division by Multiplication	Elem.	Math.
UN 002 536	Subtractive Long Division	Elem.	Math.
UN 002 537	Measuring the Area of Rectangles & Squares	M	Math.
UN 002 539	Introduction to Division & Its Relationship to Multiplication	P & M	Math.
UN 002 540	Sets/Their Terminology & How To Differentiate Between Them	M	Math.
UN 002 544	The Bar Graph - An Instrument Used For Presenting Statistical Data	M	Math.
UN 002 545	Break It Up!	P	Math.
UN 002 546	Come to Order (Row, Columns & Arrays)	P	Math.
UN 002 547	Identification of Rational Numbers in Fractional Form	M	Math.

UN 002 549	Identifying Fractions By Using A Ruler	M	Math.
UN 002 550	Ancient Numbers (Roman Numerals)	M	Math.
UN 002 551	The Introductions of Ratios	M	Math.
UN 002 552	Finding the Perimeter of a Rectangle	Elem.	
UN 002 553	The Meaning of Fractions	M	Math.
UN 002 554	Exponents/A Short Way of Writing A Long Numeral	M	Math.
UN 002 556	What Is Pythagorean Theorem?	M	Math.
UN 002 557	Common Denominators Can Be Determined Mathematically	M	Math.
UN 002 558	It's "Odd" if it's not "Even"	P	Math.
UN 002 559	Multiplication Tables Can Be Enjoyable	M	Math.
UN 002 560	Is Division Real?	M & U	Math.
UN 002 562	Division of Rational Numbers by the Reciprocal Method	M & U	Math.
UN 002 563	Finding the Common Denominator	M	Math.
UN 002 564	Binary Notation & Place Value	M & U	Math.
UN 002 595	Exact & Approximate Numbers	U	Math.
UN 002 596	The Addition of Single Digit Whole Numbers	P - U	Math.
UN 002 617	Ellipse; Physical Locus	U	Math.
UN 002 626	There Are Various Techniques to Find Simple Probabilities	M & U	Math.

UN 002 637	Computing the Area of a Rectangle by Multiplication	M	Math.
UN 002 641	Enable the Learner, Through Independent Study, to Add Like Fractions	M	Math.
UN 002 656	There Are Four Steps in Division	Elem.	
UN 002 660	Basic Factoring of Algebraic Expressions	U	
UN 002 694	Percent Notation	U	
UN 002 700	There Is A Process For Regrouping in Subtraction	Elem.	
UN 002 716	Division by Two Place Divisors	Elem.	
UN 002 770	Multiplication Facts	M	Math.
UN 002 782	Skill in Generating Numerals in Various Base Place Value Systems	Elem.	
UN 002 817	Changing Inches Into Feet	Elem.	Math.
UN 002 818	Introduction to Multiplication	P	Math.
UN 002 877	Dividing Fractions by Fractions	M	Math.
UN 002 882	Volume & Surface Area of Right Prisms	U	Geometry
UN 002 932	Arcing the Circumference with Compass & Straight Edge	Elem.	
UN 002 934	Pre-Number Introduction of Cuisenaire Rods to the Individual Child	Elem.	
UN 002 936	Geometric Shapes	P	Math.

UN 002 944	Circles	P	Math Readiness
UN 002 950	There Is A Process For Adding Four Digit Numbers	M	Math.
UN 002 954	The Fraction	M	Math.
UN 002 962	Fractions	U	Math.
UN 002 968	The Addition of Positive Integers	M & U	Math.
UN 002 973	A Fractional Number Is A Part Of A Whole	P & M	Math.
UN 002 983	Drawing Rockers Is A Way To Divide 4-Digit Numbers By 10 & 20	M	Math.
UN 003 002	Solving Incomplete Equations in Addition & Subtraction	P	Math.
UN 003 009	There Are Three Types Of Fractions	P & M	Math.
UN 003 030	The Operation of Subtraction of Signed Numbers	M & U	Math.
UN 004 033	A Parabolic Curve Can Be Constructed Accurately	M	Math.
UN 003 061	There Is A Method of Computing the Area of a Rectangle	Elem.	
UN 003 066	The Set of Natural Numbers Contains a Subset Called the Prime Numbers	P - U	Math.
UN 003 070	Slope & Y-Intercept of a Straight Line	M	Math.
UN 003 071	How to Figure Fractional Parts of a Dozen	U	Bus. Ed.

UN 003 079	A Square Has A Recognizable Shape	P	Math.
UN 003 092	Computing the Circumference of a Circle	U	Math.
UN 003 093	Identifying Prime Numbers	U	Math.
UN 003 102	A Pattern for Solving Word Problems	U	Math.
UN 003 127	The Concepts of Length, Width & Height	P	Math./Art
UN 003 143	Properties of a Right Triangle	U	Math.
UN 003 146	Completing Placeholder Equations Using Addends from 1-5 with Sums from 1-10	P	Math.
UN 003 165	A Ruler Is Made Up Of Parts	Elem.	
UN 003 184	There Are Addition Facts That Make Up Five	Elem.	
UN 003 209	Subtracting When Zero Is The Top Number	Elem.	Math.
UN 003 231	Closure	U	Math.
UN 003 234	Using Cuisenaine Rods in Math	Elem.	Math.
UN 003 236	The Addition of Tenths in Decimals	M	Math.
UN 003 239	The Quadratic Formula	M	Algebra
UN 003 242	Recognizing Grossly Incorrect Answers by Applying Estimation Prccedure	P - U	Math.
UN 003 250	Equivalent Fractions	U	Math.
UN 003 263	Unknown Addends	P	Math.
UN 003 264	The Multiplication Tables of Six	Elem.	Math.

UN 003 281	Regrouping & Subtracting	Elem.	Math.
UN 003 285	The Use of Sets Assists in Learning Enumeration	P	Math.
UN 003 287	The Letter Symbols with Cuisenaire Rods Help in Math	P	Math.
UN 003 290	Some Things Can Be Changed into Equal Parts	P	Math.
UN 003 293	Fraction Problems	U	
UN 003 297	Money	P	Math.
UN 003 298	Money	P	Math.
UN 003 308	Understanding the Sequence & Relationship of the First Four Numerals	Elem.	
UN 003 327	Genetics Requires the Ability to Compute the Probability of a Simple Event	M & U	Science/Math.
UN 003 349	Fractions	U	Math.
UN 003 370	Identifying Containers Used for Luquid Measuring	Elem.	
UN 003 377	Ways to Identify Sets	M	Math.
UN 003 389	Let's Graph It	P	Math.
UN 003 395	Angles & Triangles	M	Math.
UN 004 003	On The Line	Elem.	Math.
UN 004 001	Multiplying Two Digits by Two Digits	Elem.	Math.
UN 004 004	Easy As 1, 2, 3	Elem.	Math.
UN 004 005	Finding the Solution Set of Two Linear Equations of Two Variables	M & U	Algebra

UN 004 008	Identification of Relation Symbols	P	Math.
UN 004 009	Identifying Earlier & Later in Relation to a Clock	P	Math.
UN 004 011	Adding by the Method of Regrouping	P	Math.
UN 004 012	Computing the Circumference of A Circle	U	Math.
UN 004 013	Roman Numerals	U	Math.
UN 004 014	Renaming Numbers into Equivalent Forms	U	Math.
UN 004 016	Translation of Word Problems	M	Algebra
UN 004 018	Lines & Points	M & U	Math.
UN 004 019	Understanding Scale Drawings	U	Math.
UN 004 020	Area of Plane Figures	Elem.	Math.
UN 004 021	Equivalent Fractions	M	Math.
UN 011 183	Fractions: 1/2, 1/3, 14	P	Math.
UN 012 246	Place Value of Tens	P	Math.
UN 031 279	Identifying Prime Numbers	Elem.	Math.
UN 032 274	Recognizing & Using Coins in One Dollar	Elem.	Math.
UN 034 248	Place Value Names of Three Digit Numerals	Elem.	Math.
UN 037 277	Using Prime Numbers to Find the Least Common Denominator	Elem.	Math.
UN 039 247	Place Value of Hundreds	P	Math.

UN 040 272	Place Value in the Deminal Numeral System	Elem.	Math.
UN 047 283	Relationship of Exponents & Base Numerals Using Exponential Notation	M	Math.
UN 048 271	Exponents in the Decimal Numeral System	Elem.	Math.
UN 053 178	Idea & Relationship of Sets	P - U	Math.
UN 055 280	Multiplication of Numbers in Exponential Form	M	Math.

UN 000 425	The Building of Scales with Key Signatures in Flats	Elem.	
UN 000 539	To Enable Students to Identify & Construct Major Scales	Elem.	
UN 000 540	To Enable Students to Identify & Construct Minor Scales	Elem.	
UN 000 541	Correct Playing Position For The Beginning Clarinet	Elem.	
UN 000 542	Correct Playing Position For The Beginning Cornet	Elem.	
UN 000 683	Studying Chords I and V	P-U	Music
UN 000 684	Finding Color in Lines & Spaces	P	Music Art
UN 001 648	Produce A Good Clarinet Tone	P	Instr. Music
UN 001 920	Baton Twirling: The Two-Hand Spin	P-M	Music Gymnastics
UN 001 981	Edward MacDowell, A Famous American Composer	M	Music
UN 002 015	Whole, Half & Quarter Notes	M	Music
UN 002 058	Steps Necessary In Memorizing Music	All	Music
UN 002 592	Recognition of Basic Music Symbols	M	Music
UN 002 668	Pop Music: Past & Present	M	
UN 002 827	Understanding the Terms & Signs Commonly Used in Music	M-U	Music Choir Band

UN 002 837	Meter Signature in Musical Domposition	Elem.	Music
UN 003 000	Music Has A Recurring Pulse or Beat	Adult	Prim. Teachers
UN 003 097	Types of Youth Music	M-U	Music
UN 003 337	How To Hold the Guitar	Elem.	
UN 004 006	Identifying Note Symbols	M-U	Music

UN 000 369	The Balk in Twelve-Inch Baseball	Elem.	Baseball
UN 000 370	How To Approach the High Jump	Elem.	Track
UN 000 555	The Overhand Volleyball Serve	Elem.	Volleyball
UN 000 371	Aiming in Archery	Elem.	Archery
UN 000 556	How to Execute an Underhand Volleyball Serve	Elem.	Volleyball
UN 000 698	The "Hook" Slide in Baseball	M	Athletics
UN 000 710	Basketball Rules	M	Phys. Ed.
UN 002 795	A Pitcher Must Warm Up to Prevent Injuries to His Pitching Arm	Elem.	Baseball
UN 000 871	Golf: A Proper Grip is Basic to a Correct, Repeating Golf Swing	Elem.	Golf
UN 002 436	Fundamental Pivoting is Essential for Achieving Correct Body Position in Tennis	P	Tennis
UN 002 442	Keeping Bowling Scores with Errors	Elem.	Phys. Ed.
UN 002 454	Basketball Dribble	M	Phys. Ed.
UN 002 465	The Backhand Drive: Tennis	M	Phys. Ed.
UN 002 468	The Six Marks Used to Keep Score in Bowling	M	Phys. Ed.
UN 002 469	The Basketball Two-Handed Chest Pass	M-U	Phys. Ed.
UN 002 499	Techniques Used in Underhand Serving in Volleyball	M	Phys. Ed.

UN 002 506	Walking on the Balance Beam	P-M	Phys. Ed.
UN 002 509	Punching & Blocking the Ball in Tennis	M	Phys. Ed.
UN 002 569	Techniques in Using the Forward Pass in Girls' Touch Football	M	Phys. Ed.
UN 002 601	Rules of Conduct in the Pool Area	U	Phys. Ed.
UN 003 024	The Hand Spring	Elem.	
UN 003 025	The Forward Roll	Elem.	
UN 003 038	The Backhand Drive in Tennis	M	Phys. Ed.
UN 003 181	The Second-Baseman Has A Definite Area on the Softball Diamond for Which She is Responsible	Elem.	Baseball
UN 003 197	"Hammer-Nail" Service for Tennis Beginners	Elem.	Tennis
UN 003 199	There Is A Correct Method of Learning the Forward Drive	Elem.	
UN 003 240	The Two Basic Techniques of Dribbling a Basketball	U	Phys. Ed.
UN 003 376	Beginning Freestyle Swimming	U	Phys. Ed.

UN 000 203	How To Use A Clue Chart	Elem.	Zoology
UN 000 204	Physical Characteristics Of A Pond	Elem.	
UN 000 205	Soil Has Different Properties That Affect Plant Growth	Elem.	
UN 000 209	Chlorophyll Is Characteristic of Green Plants	M & U	Science
UN 000 214	Micro-Organisms	Elem.	
UN 000 222	Characteristic Aquatic Plants Of A Pond	E & M	Science
UN 000 224	Observing Bird Structures: Feet, Legs & Beaks	Elem.	Science
UN 000 225	Attracting Birds for Direct Observation	Elem.	Science
UN 000 226	Substances In Soil	M	Science
UN 000 230	The Structure of the Atom	U	Science
UN 000 231	The Human Knee Joint	U	Science
UN 000 232	Blood Flows Through The Heart In A Directional & Predictable Pathway	U	Biology
UN 000 250	Carnivorous Insects	P	Science
UN 000 251	Carnivorous Mammals	Elem.	
UN 000 257	Using Energy From Moving Water	Elem.	
UN 000 263	A Collection of Materials or Ideas to Teach Children What a Magnet Can do	Elem.	
UN 000 264	The Wheel & Axle	Elem.	
UN 000 265	The Parts of a Seed	Elem.	

UN 000 266	The Composition of Soil	M	Science
UN 000 268	Wind & Water Change the Earth's Surface	M	Science
UN 000 269	The Changing Earth's Surface	M	Science
UN 000 303	Magnetic Compass	Elem.	
UN 000 305	Learning to Make Simple Microscope Slides	Elem.	
UN 000 306	The Parts of the Compound Microscope Explained	Elem.	
UN 000 307	Finding Microscope Specimens	Elem.	
UN 000 314	Learning to Use the Compound Microscope	Elem.	
UN ooo 380	Fun With Insects	Elem.	
UN 000 381	Observing Bird Structures: Wings & Tails	Elem.	
UN 000 382	Coloration of Vertebrates	Elem.	
UN 000 383	Trees	Elem.	
UN 000 384	Concept of Erosion	Elem.	
UN 000 385	The Concept of Weathering	Elem.	
UN 000 386	Special Adaptations for Seed Dispersal	Elem.	
UN 000 387	Animals That Visit A Pond	Elem.	
UN 000 405	How Sound Travels	Elem.	
UN 000 427	Insects Can Be Identified	Elem.	
UN 000 432	The Scientific Method	Elem.	
UN 000 438	Carnivorous Birds	Elem.	
UN 000 439	Understanding Magnets & Their Uses	Elem.	

UN 000 448	The Fundamental Particles of the Atom are the Electron, Proton & Neutron	Elem.	
UN 000 452	Plants Need Water	Elem.	
UN 000 481	Hardness As A Property of Material	Elem.	
UN 000 509	Light Energy	U	
UN 000 532	The Materials of Photosynthesis	Elem.	
UN 000 533	The Circulatory System of a Frog	Elem.	
UN 000 561	How to Grow Plants by Grafting	Elem.	
UN 000 562	How to Grow Plants by Layering	Elem.	
UN 000 627	Frogs & Toads are Different	Elem.	
UN 000 635	Learning What A Well-Balanced Diet Is	P	
UN 000 685	Respiration in Man & Other Animals	U	Science
UN 000 704	Concepts of Magnetism	Elem.	Science
UN 000 709	Plants In A Tropical Rain Forest	Elem.	Science
UN 000 766	Identifying Simple Three-Dimensional Shapes	P & U	Science
UN 000 785	Mitosis - Cell Division	Elem.	
UN 000 794	Motion - How Objects Move	Elem.	
UN 000 805	Locating the North Star	Elem.	
UN 000 865	Rocks - Hardness Testing	U	
UN 000 866	Rocks - Density of Rocks	U	

UN 000 867	Rocks - Sediments	U	
UN 000 877	The Human Eye	Elem. Biology	
UN 000 882	Your Five Senses - Becoming Aware	Elem.	
UN 001 600	The Water Cycle	P	Science
UN 001 618	Refraction of Light	M	Science
UN 001 627	The ABC's of Body Structure	M	Health/Science
UN 001 637	How to Identify a Douglas Fir	M	Science/Soc.St.
UN 001 638	Insects	M	Science
UN 001 654	Fundamentals of the Metric System	Elem.& U	Science
UN 001 655	Studying the Parts of the Earthworm & Their Functions	M & U	Biology
UN 001 734	Classification of Vertebrates	M	Science
UN 001 782	This Is For The Birds!	Elem.	Science
UN 001 859	Pulley and Its Uses.		Science
UN 001 887	Simple Magnets	P	Science
UN 001 907	Collecting Maple Sap & Producing Maple Syrup	Elem.	Science
UN 001 929	Poisonous Snakes of North America	M	Science
UN 001 947	Artificial Respiration	M & U Adult	Health
UN 001 979	Raising Tropical Fish	M	Science
UN 001 980	Three Causes of Earthquakes	M	Science
UN 001 991	Blood and Circulation	M	Science/Health
UN 002 008	Basic Differences in the Planets of our Solar System	M	Science

UN 002 014	How to Know the Insects	M	Bio./Science
UN 002 055	Constructing A Pinhole Camera	M	Science
UN 002 064	The Teeth of Mammals	M	Science
UN 002 065	Drug Abuse	M	Science
UN 002 110	The Way Dangerous Drugs Enter the Body	M	Health & Drug Abuse
UN 002 113	Marijuana	M & U	Health
UN 002 121	Gas Exchange in the Lungs (Three Million Balloons)	M & U	Science/Health or Phys. Ed.
UN 002 201	Practical Knowledge of the Automobile	M	Science or Driver Ed.
UN 002 221	Conservation: Wildlife Management	M	Science
UN 002 310	Care of Your Teeth	M	Health
UN 002 325	The Discovery & Deceding of the Rosetta Stone	Elem.	
UN 002 348	Animals are Vertebrate or Invertebrate	M	Science
UN 002 354	Solids as One Form of Matter	P	Science
UN 002 372	Sex Cell Formation	Elem.	
UN 002 375	The Factoring of Binomials	Elem.	
UN 002 376	The Sense of Taste	Elem.	
UN 002 380	Photosynthesis	Elem.	
UN 002 401	Common Shapes	P	Science
UN 002 402	An Approach to the Recognition of a Scientific Method of Investigation	M	Science

UN 002 405	Soil Conservation	P	Science
UN 002 410	Why the Earth is Arranged in Three Layers	M	Science
UN 002 416	Common Characteristics of an Insect	P	Science
UN 002 430	Our World is Full of Many Different Kinds of Animals	Elem.	
UN 002 431	Collection, Identification & Preservation of Ocean Algae	U	Science
UN 002 432	Insect: Identification, Dissection & Preservation	U	Science
UN 002 434	The Poisonous Yellow Oleander	P	Science
UN 002 435	What Wind Is	P	Science
UN 002 447	Color & Size of Seeds	P	Science
UN 002 463	Your Own Western Union	U	Science
UN 002 470	A New Life Begins	M	Science
UN 002 480	I Am A Fish	P	Science
UN 002 491	Magnets Have Unique Characteristics	M	Science
UN 002 501	Primary Nutrients in Plant Growth	M & U	
UN 002 502	Specific Gravity	M	Science
UN 002 503	Characteristics of Echinoderms	M	Science
UN 002 504	The Percentage of Seed Germination	M	Science
UN 002 532	Atoms Have Structure	M	Science
UN 002 533	Metamorphosis & Its Two Types	M	Science

UN 002 548	The Social Order of Insects	M	Science
UN 002 578	Various Methods of Soil Conservation Used in the Pampa, Texas Area	M	Science
UN 002 580	Syncopated Sound	P	Science
UN 002 591	The Three Different Ways of Growing Up	M	Health
UN 002 600	Dangerous Drugs & Their Effects	M	Counseling, Health & SS
UN 002 616	Radio-Activity	M & U	Science
UN 002 628	Techniques of Film Developing	M	Art
UN 002 630	Convection Currents	M	Science
UN 002 631	The Earth Is In Constant Change	M	Science
UN 002 639	Health Is Not Just Physical	M	Science & Mental Health
UN 002 642	There Are Many Things to Know About Snow	P	Science
UN 002 653	Fire Needs Air To Burn	P	
UN 002 657	Prehistoric Animals: What They Are & How Scientists Study Them	M	
UN 002 676	Hawaiian Types of Lava	P	Science
UN 002 677	Hawaii, the Volcano State	P	Science
UN 002 678	Magnets	P	Science
UN 002 683	Compass Directions & Degrees	M	
UN 002 689	There is Life in a Drop of Water	Elem.	Science
UN 002 691	Identification of Human Reproductive Structures & Function	Elem.	
UN 002 703	Laboratory Measuring Devices	Elem.	Science

UN 002 703	Laboratory Measuring Devices	Elem.	Science
UN 002 729	How to Distinguish Basic Cloud Types	M	Science
UN 002 747	Water Pollution	Elem.	
UN 002 766	Drug Use	M	Health
UN 002 771	Evaporation	M	Science
UN 002 790	The Sun - Our Source of Light	P	
UN 002 799	Energy	P	Science
UN 002 800	Self Understanding	M	Health
UN 002 803	Detecting Molecules Through Our Senses: Smell & Taste	P	Science
UN 002 806	How to Identify & Classify Cameras	M & U	Photography
UN 002 810	Does Light Travel Through All Materials?	Elem.	Science
UN 002 843	Measurement is Comparing	M	Science
UN 002 846	Making Water Safe To Drink	M	Life Science
UN 002 889	Heat Is Transferred by Conduction	M	Science
UN 002 895	Rust	P	Science
UN 002 919	The Microscope	M & U	Science
UN 002 922	Rocks Can Be Identified By Their Composition	M	Science
UN 002 942	An Animal & Its Environment	M	Science
UN 002 943	Sedimentary Rocks	M & U	Science
UN 002 957	Photosynthesis (Secondary)	M & U	Science

UN 002 976	Writing A Problem For A Science Experiment	M & U	Science
UN 002 989	The Properties of Air Can Be Identified	M	Science
UN 002 990	Operating the Bioscope	Elem.	Science
UN 002 993	There Are Causes & Effects of Pollution	M	Science
UN 003 004	There Are Three Major Classifications of Drugs	M & U	Health
UN 003 007	Weather Instruments	P & M	Science
UN 003 012	Why People Use Drugs (Secondary Level)	M & U	Soc. St.
UN 003 019	What Is A Calorie & How Is It Used?	Elem.	
UN 003 039	Permanent Teeth	M	Science
UN 003 040	The Rocket Engine Is A Function of Certain Principles	P & M	Science
UN 003 056	Water Goes Through A Process Called the Water Cycle	Elem.	
UN 003 057	There Are Ways To Use The Hypothesis In Solving A Problem.	Elem.	
UN 003 073	How To Prepare Slides For The Microscope or Bioscope	M	Science
UN 003 078	You Are What You Eat	Elem.	
UN 003 100	What Is Needed To Make An Electrical Circuit	Elem.	Science
UN 003 123	Living Things Have Four Basic Needs	Elem.	Science
UN 003 142	The Basics of the Natural Environment	M	Science

UN 003 163	The Selection of a Well-Balanced Diet	Elem.	
UN 003 179	The Use of Marijuana Has Known Effects on the Body	Elem.	
UN 003 191	There Are Five Steps in the Scientific Method	Elem.	
UN 003 196	All Living Cells Have Three Main Parts	Elem.	
UN 003 198	A Food Web Diagram Shows the Interaction Within A Group of Organisms	Elem.	
UN 003 208	Focal Length of a Convex Lens	M & U	Science
UN 003 212	The Three Systems of the Body	M	Science/Health
UN 003 215	There Is A Way To Find The Polaris Star	M	Science
UN 003 217	A Circuit	M	Science
UN 003 218	Digestion of Food in the Human Body	M	Science/Health
UN 003 221	Five Major Senses	P	Science
UN 003 238	Seeds Have Many Characteristics	Elem.	Science
UN 003 249	Excessive Drinking of Alcohol Has Detrimental Effects	M	Health
UN 003 251	The Crown of Thorns Starfish	P	Science/Soc.St.
UN 003 254	The Wind, Air in Motion	P & M	Science
UN 003 255	Bacteria Have Three Different Shapes	Elem.	Science
UN 003 256	Drugs & Their Abuses	M & U	Health/Science Counseling

UN 003 259	Wax Grafting Two Types of Closely Related Plants	M	Science
UN 003 265	Three Regions in the Ocean	M	Science
UN 003 268	Developing Self Awareness in the Learner	P	Social Science
UN 003 283.	Amphetamines Can Be Harmful to Health	Elem.	Drug Abuse & Science
UN 003 284	Smog Is Harmful To Man	P	Science
UN 003 289	Classifying Animals	P & M	Science
UN 003 309	Please Pass The Protein	Elem.	
UN 003 313	Three Major Types of Rocks	M	Science
UN 003 315	Sounds & Vibrations in Matter Which We Can Hear	P	Science
UN 003 316	All Fuels Are Made From Plant Materials	P	Science
UN 003 326	The Vast Amount of Water On Our Planet	M	Science
UN 003 330	There Are Many Things To Know About Clouds	P	
UN 003 334	Drug Abuse	M	
UN 003 343	Molecules Behave In Certain Ways	P	Science
UN 003 344	Air Is Real	P	Science
UN 003 345	Effects of Using Marijuana	M	Health/Science
UN 003 368	Fur, Feathers & Scales	Elem.	Biology
UN 003 369	The Meaning of a Chemical Equation	M	Science
UN 003 385	Colors - Warm & Cool?	Elem.	Science
UN 004 017	Can You Read Your Science Test?	M	Science

UN 000 169	How Topography & Climate of Japan Affects the Lives of the People	M	Soc. Science
UN 000 171	Adaptation to Environment	Elem.	
UN 000 175	Culture of the Feudal Ages	Elem.	
UN 000 179	Aspects of the Culture of Primitive Man	U	Soc. Science
UN 000 180	Many Small Communities Grew into Very Large Cities	M	
UN 000 181	Aspects of the Culture of Early Communities	U	Soc. Science
UN 000 186	Trade with Japan	Elem.	Soc. Studies
UN 000 210	Twenty Years of Warfare Between Arabs & Israelis	Elem.	
UN 000 211	Study in Map Skills	M	Soc. Science
UN 000 211	Map Skills	Elem.	
UN 000 215	Map Skills	Elem.	Soc. Studies
UN 000 229	History of Newspapers: Before the Printing Press	U	World History
UN 000 338	To Be Able To Identify Those Items in the U. S. Constitution That Forbid the Federal Government from Depriving Any Person of "Life, Liberty & Property, Without Due Process of Law."	Elem.	
UN 000 339	Article Five of United States Constitution	U	Social Science/ U. S. History
UN 000 341	Using Graphs in Social Studies	M or U	Soc. Science

UN 000 342	A New Frontier	Elem.	Amer. History
UN 000 357	Using Time Lines & Multiple Time Lines in Social Studies	Elem.	
UN 000 364	Freedom of Speech	Elem.	
UN 000 459.	Determining Time by Longitude	Elem.	Science
UN 000 468	Japanese Civilization	Elem.	
UN 000 472	Chinese Civilization	Elem.	
UN 000 477	Eastern & Southern Asia	Elem.	Soc. Studies
UN 000 480	The Concept of Transportation	Elem.	Soc. Science
UN 000 512	The Great Man Emphasizing American Literature & the Federal Period in American History	Elem.	
UN 000 548	Conflict	Elem.	World History
ID 000 561	Enterprise Exemplary Education Project/Social Science System/Mission Objectives	Elem.	
ID 000 562	Enterprise Project: Individualized Instruction	Elem.	Soc. Science
UN 000 563	The Hawaiian Islands	U	Geography
UN 000 564	Hawaii: Its Topography	U	Geography
UN 000 579	Volcanoes of the Island of Hawaii	Elem.	
UN 000 580	Identification of the Hawaiian Islands	Elem.	Soc. Science
UN 000 620	The Japanese Diet Pattern Differs from the Western Diet Pattern	Elem.	

UN 000 636	Community Helpers	P	Soc. Science
UN 000 676	Renaissance Man/A Scientist	All	World History
UN 000 696	The Battle of Tours	U	History
UN 000 718	The World's Geography	U	Soc. Studies
UN 000 719	Earliest America/Opening A New World	U	History & Soc. Science
UN 000 736	Why Study U. S. History?	U	Soc. Science
UN 000 769	Members of Minority Groups Help	Elem.	Soc. Studies
UN 000 775	Do I Have to Choose? Limited Means vs. Unlimited Wants	Elem.	Economics
UN 000 786	Teenage Subculture	U	Soc. Science
UN 000 787	Are We Living In A New Age of Romanticism?	Elem.	
UN 000 790	How Geography Affects the Economy of France	Elem.	
UN 000 799	Types of Historical Sources	Elem.	
UN 000 800	Causes of the Revolutionary War	U	Soc. Studies
UN 001 614	Revolt in America	U	Soc. Science
UN 001 616	Civil Disobedience/Civil Disorder	M & U	Soc. Science
UN 001 628	Role of American Institutions in Teaching Racially Tolerant Behavior	M & U	Soc. Science
UN 001 643	Cause & Effect Is A Universal Law of Nature	U	Soc. Science
UN 001 850	There Are Varied Physical Features of South America	Elem.	

UN 001 857	The Circumstances Affecting Life in the Early Colonial Family	Elem.	
UN 001 888	Main Methods of Travel Used By Groups That Came West In The 1840's & 1850's	Elem.	
UN 001 893	The Structure of the Indian Tepee	Elem.	
UN 001 908	Raising Sheep On A Small Mid-Western Farm	Elem.	Soc. Studies
UN 001 942	Winter Wheat	P & M	Soc. Studies
UN 001 945	Helping Blacks Understand Their Own Afro-American Background	M	Social Studies/ Humanities
UN 001 951	How A Bill Becomes A Law	Elem.	Soc. Studies
UN 001 955	Vietnam: A Horizontal Study of its Colonial Past & its Problematic Present	M	Social Studies
UN 001 972	Commercial Airline Flying Is Desirable	M	Soc. Studies
UN 001 975	Geography of Mediterranean Africa	M	Geography & Social Studies
UN 001 984	European Backgrounds of American History	U	Soc. Science
UN 002 043	The Afro-American in United States History	M & U	Soc. Studies
UN 002 052	Specialization Leads to Trade	M & U	Soc. Studies
UN 002 072	The Power of Impeachment	M & U	Civics
UN 002 102	Efficiency & Inter-dependence of Supermarket Employees	Elem.	Soc. Studies
UN 002 106	Natural Resources of Alaska	M	Geography

UN 002 145	Reconstruction	U	U. S. History
UN 002 158	Comparing Democracies	U	Soc. Studies
UN 002 166	The U. S. & Canada Are Close Neighbors	M	Soc. Studies
UN 002 176	Natural Regions of Africa & Their Effect on the People	U	Soc. Studies
UN 002 218	An American Extravaganza/ Exciting Episodes in American History	U	U. S. History
UN 002 226	Military Triumps of the Allies Against the Axis in World War II	U	U. S. History
UN 002 300	Japan	M	Soc. Studies
UN 002 304	Cause of the Revolutionary War	M & U	Soc. Studies
UN 002 341	The Many Jobs of a TV News Program	P	Soc. Studies/ Language Arts
UN 002 353	A Time Line Can Show Events in History	M	History
UN 002 377	What Are The Qualifications Necessary to Become President?	Elem.	
UN 002 378	The Fall of the Roman Empire	Elem.	
UN 002 414	African Tribes	U	Soc. Studies
UN 002 445	Using Latitude & Longitude to Locate Places	M	Geography
UN 002 451	Basic Parliamentary Practice	U	Soc. Studies
UN 002 507	India: A Study of Change	Elem.	

UN 002 517	The American Cowboy Wears Five Special Articles of Clothing to Aid Him in His Work	M	Soc. Studies
UN 002 519	Identifying Egyptian Civilization by Exploring Their Tombs	U	Soc. Science
UN 002 587	The Geography of Mediterranean Africa	M	Geography
UN 002 588	The Geography of the Near East	M	Geography
UN 002 589	The Geography of Eastern Mediterranean Europe	M	Geography
UN 002 590	The Geography of Western Mediterranean Europe	M	Geography
UN 002 618	Comparative Land Use	M & U	Soc. Studies
UN 002 635	Japan: A Modern Industrial Nation Despite Scarcity of Natural Resources	U	Soc. Studies
UN 002 636	Contributions to Economy of Alaska	M	Soc. Studies
UN 002 640	Latitude Shows Distance in Relation to the Equator	Elem.	Soc. Studies
UN 002 643	Important Persons from the Northeast Section of the United States	M	Soc. Studies
UN 002 644	Farming: The First Occupation of the Northeast	M	Soc. Studies
UN 002 645	Manufacturing-the Northeast	M	Soc. Studies
UN 002 646	Northeast States, Capitals & Physical Features	M	Soc. Studies

UN 002 647	European Settlement of the Northeastern States	M	Soc. Studies
UN 002 648	There Is A Difference Between Cardinal & Up-Down Directions	P	Soc. Studies
UN 002 649	How the Star-Spangles Banner Became Our National Anthem	Elem.	Soc. Studies
UN 002 652	Understanding of Colonial Life	P	Social Studies
UN 002 685	California: Discovery & Exploration	M	
UN 002 692	There Are Three Types of Conflict	Elem.	Psychology
UN 002 706	The Founding Fathers	U	Soc. Studies
UN 002 710	The Main Cause of the Revolutionary War	Elem.	Social Science
UN 002 [illegible]	Crops Grown on South Pacific Islands	M	Soc. Studies
UN 002 741	Learning Latitudes	U	Geography
UN 002 772	How To Amend the Constitution	M & U	Civics
UN 002 775	How A Bill Becomes A Law	M & U	Social Science
UN 002 776	Government is Needed to Solve the Nation's Problems	M & U	
UN 002 808	Recognizing Parallels of Latitude Is Essential In Finding Location on Earth	Elem.	Soc. Science
UN 002 815	Wet & Dry Topical Climate in Southern Florida	Elem.	Soc. Science

UN 002 892	African Civilization & the Initial Arrival of Afro-Americans to the Western Hemisphere	Elem.	Soc. Studies
UN 002 916	Environmental Influences in Polynesia	Elem.	
UN 002 917	One Kind of South Pacific Island The Atoll Island	Elem.	
UN 002 930	Folklore Characters Tell A Story About American Heritage	Elem.	
UN 002 931	The Concept of Measurement in Inches & Feet	Elem.	
UN 002 933	Glaciers	Elem.	
UN 002 939	State & Local Government Part I	M	Soc. Studies
UN 002 946	Colonial Communications	M	Soc. Studies
UN 002 951	Mexico Is A Land of Many Different Kinds of Geography	M	Soc. Science
UN 002 953	The Maple Tree Family	Elem.	Soc. Science
UN 002 981	The Cultural Life of the Aztecs Was Influenced By Cortez	M	Soc. Studies
UN 002 988	Self-Discipline Is Necessary in Independent Study or Small Group Situations	M	Soc. Science
UN 003 005	Telling Time	P	
UN 003 018	There Is A Way To Know One's Self	P	Soc. Science
UN 003 026	The Spanish-American War Was Caused by Political, Social, Economic & Military Reasons	M	Soc. Studies

UN 003 044	Acorn Preparation by Early California Indians	Elem.	Soc. Studies
UN 003 045	Benjamin Franklin	M	Soc. Studies
UN 003 049	Brasilia: Brazil's Jet-Age Capital	Elem.	
UN 003 064	City Map Reading	Elem.	Geography/ Map Reading
UN 003 072	The Historical Development of the Alphabet Occurred in Four Steps	Elem.	
UN 003 077	Role of Black Americans Prior to the Civil War	M & U	Soc. Studies
UN 003 082	There Are Many Basic Symbols Which Can Be Applied to Man & His Environment	Elem.	
UN 003 083	The Policy of Apartheid	U	Soc. Studies
UN 003 085	The Pony Express	M	Soc. Studies
UN 003 107	Black Americans Have Made Contributions in the Field of Medicine	P & M	Soc. Studies
UN 003 114	Early Pioneer Needs in Nebraska	M	Soc. Studies
UN 003 115	Taxation & Trade Laws Caused Separation of Colonies from Great Britain	Elem.	Soc. Science
UN 003 121	Reading A California Map	Elem.	Soc. Studies
UN 003 122	Air Pollution	M	Soc. Studies
UN 003 125	The Compromise of 1850	U	Soc. Studies
UN 003 133	African Is A Land of Great Geographical Variety	Elem.	Soc. Studies

UN 003 134	A Knowledge of Geographical Terms Is Basic to Understanding Land & Water Forms	M & U	Soc. Science
UN 003 155	The Difference Between A Country & A Continent	U	Soc. Studies
UN 003 155	Is It A Country? Or Or Or Is It A Continent?	M & U	Soc. Studies
UN 003 158	The Importance of the Negro in American History	Elem.	
UN 003 159	Black Heroes of America	Elem.	
UN 003 174	What Natural Resources Are & the Uses That We all Make of these Resources	Elem.	
UN 003 227	Thomas Jefferson	Elem.	Soc. Studies
UN 003 233	Reading Latitude & Longitude Locations	M	Soc. Studies
UN 003 248	The Lines of the Hawaiian People Resulted From Its Geographical Location	M & U	Soc. Studies
UN 003 252	Physical Nature of Rivers	Elem.	Geography
UN 003 258	Western Marine Climate of Canada	M	Soc. Studies
UN 003 260	Industrial Revolution	M	Soc. Studies
UN 003 286	Natural Resources	Elem.	
UN 003 299	How To Get Along With People	Elem.	
UN 003 310	Self-Respect Can Be Achieved	M	Soc. Science
UN 003 325	Black Americans in the Field of Education & Sports	P & M	Soc. Studies

UN 003 340	Who Are These People?	M	Soc. Studies
UN 003 379	Land Masses Can Be Identified with Specific Geographical Terms	M	Soc. Studies
UN 003 381	Ups & Downs at Gettysburg	Elem.	
UN 003 390	Here We Are, But Where Is Here?	Elem.	Soc. Studies
UN 004 007	How To Use A Scale In Measuring Distance On A Map	Elem.	Soc. Science/ Math.

CURR 000 001	Language Arts Scope and Sequence	K-8	LA
CURR 000 002	Language Arts Instructional Materials	1-2	LA
CURR 000 003	Language Arts Instructional Materials	3-4	LA
CURR 000 004	Mathematics Scope and Sequence	K-8	MA
CURR 000 005	Mathematics Pre-Post Tests	3-4	MA
CURR 000 006	Social Studies Scope and Sequence	K-8	SS
CURR 000 007	Social Studies Instructional Units	K-8	SS
CURR 000 008	Science Scope and Sequence	K-8	SC
CURR 000 009	Science Course of Study	7	SC
CURR 000 010	Science: 14 Self-Pacing Units	8	SC
CURR 000 011	Art, Music, and Physical Education Scope and Sequence	K-8	Misc.
CURR 000 012	Keeping Order (Coding): Instructional Materials, Audio-Visual Aides, Microfiche	K-8	Misc.
CURR 000 013	Diagnosis: Academic Level & Performance Capabilities	K-8	Misc.